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Abbreviations

R&D	Research and Development
M&A	Mergers and Acquisitions
TMT	Top Management Team
SBU	Strategic Business Unit
BU	Business Unit
IT	Information Technology

Introduction

To my knowledge, so far only a few attempts have been made to comparatively explore the complex process of group decision-making in organisations. This Master thesis aims at contributing to an explanation for relevant parameters of group decision-making and how this process is embedded in organisational contexts. Organisations consist of overlapping entities and different committees which are confronted with the increasing complexity of management decisions in different areas, where technological and competitive change is enormous.

“Executives belong to groups that oversee compensation and strategy and hiring and firing and approving HR policies and figuring out how to cut costs. These teams might meet every day in person or correspond via email or telecommute from all over the world.” (Duhigg, 2016, p. 69)

Typically, group decisions in contemporary organisations emerge from independent executive teams in top, middle and lower management levels, depending on the hierarchical level of the issue.

Against this backdrop, I would like to find out how group decision-making is carried out in organisations. What kinds of topics are participatory decision-making processes performed for? Why and when is group decision-making used? How is final agreement in groups reached? Who are the decision-makers? How does the flow of information function (collecting activities, exchange activities, number of alternatives)?

These questions are fundamental in order to analyse group decision-making processes in organisations. In the literature, these issues are often discussed only partially and one-sided (e.g. team performance, decision-process models, decision quality, etc.) and comprehensive topics are neglected, resulting from a lack of empirical evidence on this particular subject. In this master thesis, such empirical evidence will be delivered. The group decision-making process from its get-go to its final decision-making sequence is going to be investigated. To this end, a theoretical framework was conceived in chapter one in order to provide the underlying information for the qualitative study which was carried out from January 2014 to September 2015. Relevant case studies were selected and screened for related information about group decision-making. In addition, twenty five semi-structured interviews were conducted with executive

members from different organisations in Vienna. The special methods (case studies, semi-structured interviews) are described in chapter two and the results of the case studies and qualitative interviews are illustrated in chapter three. The starting point of this research procedure was that the composition and nature of groups, size, structure, purpose affect their functioning during decision-making much more. Decision-making groups may be quite informal in nature or formally appointed following a specific goal. The participatory process of group decision-making depicts several individuals acting collectively, analyse problems and situations, consider and assess alternative activities, and select from among the alternatives a final solution.

1 Theoretical Background

In this chapter main terms such as “group decision-making/group problem solving” and team/group” will be clarified. Then, the theory behind this research about group decision-making and its important parameters of group problem solving that are essential to consider for next research steps and further analysis will be introduced.

1.1 Desk Research

Before the core data collection effort was started, a widespread literature screening was carried out with the aim of getting a comprehensive overview of important theories, definitions, aspects and implications regarding the topic of group decision-making.

In a first step relevant scientific literature on decision-making processes was started, including information processes and the role of groups in organisations in order to get an insight in relevant aspects for further investigation of group decision-making. There exist several theories and models concerning group decision-making and its underlying processes, but empirical evidence and a link to real organisations is missing. Nevertheless some studies (e.g. Grant, 2003; Tarakci et al. 2013; Bourgeois III & Eisenhardt 1988; Eisenhardt 1989; Smith 2014; Barsade et al. 2000 etc.) contribute to holistic picture of group decision-making in organisations. Moreover most of what we know about this topic is derived from different investigations focusing on team performance, team cohesiveness, team effectiveness, decision quality or effective strategic decision-making etc., but group decision-making has not been in the centre of these examinations. Thus, only a few components of group decision-making have been investigated, whereas a holistic picture of the whole process and its parameters is missing. For these reasons previous research has failed to provide sufficient insight into this very complex process.

This case study analysis tried to provide data for a better understanding of group decision-making with regard to organisational contexts. Relevant parameters for group decision-making were collected and analysed. These considerations will be described in the next chapters in Section “Theoretical Background.” For these selected parameters information from case studies was collected and included into the theoretical concept that is used as benchmark in subsequent research process, but this framework did not limit

the explorative character of the research; instead it is a starting point and orientation for further research steps.

1.2 Terms and Definitions

1.2.1 Group Decision-making and Joint Problem Solving

There exists a huge amount of definitions and different terms regarding group decision-making. This fact embodies the complexity of the phenomenon “group decision-making”. The following two definitions appear to be appropriate in the context of business organisations.

“Decision-making is making a choice among the alternatives available to us. When two people are involved in making a decision they both have agreed before the decision is made. When more than two people are involved in making decisions, the situation changes. The individual choice of each group member must be considered as part of the group decision. One way the group decisions are made is by majority vote, another way is by consensus.” (Fiala, 1997, p. 129)

“**Group decision-making** can be viewed as a process whereby groups move from initial disagreement to a sufficient level of agreement to **satisfy some decision rule**” (Baron, Kerr & Miller, 1992, p. 108).

According to the present case studies one can speak of group decision-making or collective decision-making if the final decision is made only by one individual according to a prior decision-making process of several persons.

Joint problem solving is defined as “the basic trend in the cooperative decision-making with transformation of a **possible conflict** to a joint problem. The problem solving statement enables us to use some formal problem solving procedures that help to **find consensus** for decision-makers.” (Fiala, 1997, p. 128f.)

No specific distinction has been made in the literature between group decision-making and joint problem solving. Both group decision-making and joint problem solving are concerned with reaching final agreement as a group. Joint problem solving is seen by literature more like solving a conflict where decision makers have opposed goals and need a process for finding final agreement. However group decision-making consider different decision rules and in turn joint problem solving does not mention explicitly any decision rule for final decision-making (see above definitions).

In the present work the distinctions between these two terms are not discussed in detail. Thus, only group decision-making will be considered, and joint problem solving and related expressions are seen as interchangeable.

1.2.2 Team, Group and Working Group

Team– “We are a team”

Teams are small working groups, with common goals, intense mutual relationships, a specific work attitude (teamwork) and above-average group cohesion. Each member acts in best interest of its team (team spirit) and individual goals are secondary. (Kitzler 2005, p.3)

A team is “a set of interdependent parties, small in number, who recognize themselves as a team and have some degree of shared accountability” (Cohen & Bailey, 1997, cited in Gibson 2006, p. 452)

“A team is a small number of people with complementary skills who are committed to a common purpose, set of performance goals, and approach for which they hold themselves mutually accountable. (...) Teams produce discrete work products through joint contributions of their members.” (Katzenbach & Smith, 2008, p. 8)

Group – “I am part of a group”

According to the work of Kitzler (2005, p. 3) a group consists of at least three members, whereas the possibility of direct interaction (face-to face contact) between each group members over a longer period of time for reaching a certain goal should be provided. The outcome of this is the development of certain group cohesion and its rules and norms that prevail for the group (ibid., p. 3).

There are the following differences and similarities between groups and teams identified by Kitzler (2005, p. 3f.):

Table 1-1: Group and Team

Differences	Similarities
Goals (personal vs. shared aims)	At least three group members
Cohesion (lose vs. strong)	Intense social interaction over longer period of time
Functional interdependence (weak vs. strong)	Specific common norms and goals
Cooperation and trust (weak vs. strong)	Specific structure of roles

Working Group

This term corresponds to a group and is linked to an organisational context. Members of working groups act mainly on their own preserving their individuality, but there is social activity, sharing of information or making collective decisions. (Katzenbach & Smith, 2008, p. 6ff.)

„Working groups are both prevalent and effective in large organizations where individual accountability is most important. They come together to share information, perspectives, and insights: to make decisions that help each person to do his or her job better and to reinforce individual performance.” (Katzenbach & Smith, 2008, p. 6)

According to Katzenbach and Smith (2008, p. 6ff.) there are the following distinctions between working group and team:

Table 1-2: Working Group and Team

Working group	Team
Definite leader	Shared leadership roles
Performance measures indirectly	Direct performance measurement – “collective work product”
Group members with individual accountability	Team members with individual and mutual accountability
Discusses, decides and delegates	Discusses, decides and works

Certainly there are differences between the entities team, working group and group. But all three entities are making cooperative decisions. Especially in organisational settings these roles are not sharply separated but overlapping and employees or managers use the terms “groups”, “working groups” and “teams” substitutable. Hence these expressions are used interchangeable in this manuscript.

1.3 Theoretical concept/framework

Below the theoretical framework and important parameters of group decision-making is presented. For better understanding, it is necessary to clarify this structure. First, the input variables will be considered; group task, decision-making context and group structure. Secondly the process variables will be presented: information, decision, and final decision-making process. Finally, it is necessary to discuss why group decisions are part of organisational decision-making. This aspect is part of the outcome variable.

1.3.1 INPUT variables

- a) Group Task (DEMAND variable)
- b) Decision-making context (DEMAND variable)
- c) Group Structure (RESOURCE variable)

1.3.2 PROCESS variables

- a) Decision Process (stages & cycles)
- b) Information Process (processing & exchange)
- c) Final Agreement Process in Group (decision-making rule)

1.3.3 OUTCOME variable (reason of group decision-making)

This variable sheds light on the motivation using group decisions in organisations.

This above-mentioned classification is the basis for the further analysis that can be derived by the following four questions:

- (1) What is the problem?
- (2) Who is/are the decision maker/s?
- (3) How does the group come to a solution?
- (4) Why using group decisions?

The major parameters of group decision-making are the answers to these four questions

- (1) Task (decision type, strategic - operative)
- (2) Group (quantity, background, type, decision power)
- (3) Procedure/Problem solving method
- (4) Motives/Reasons

1.3.1 INPUT variables

Whether or not to assign a decision problem to the group is dependent on group's potential productivity. Two input factors play a major role in this context, explicitly task demands and member resources such as proper knowledge, abilities, skills etc. and the pertinence of each resource depends on the specific task. (Steiner, 1966 & 1972, cited in Baron, Kerr & Miller, 1992, p. 33)

a) Group Task/Problem

One important input variable is group task which is embedded in the following context during group decision-making.

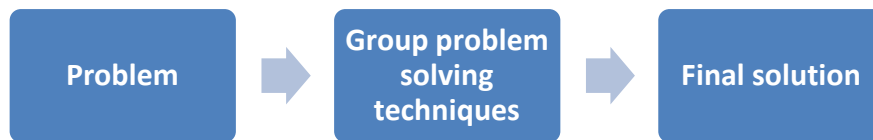


Figure 1-1: Context of Decision Task

Let us now examine important parts of that sequence. *Problems* are completely *different* in

- “domain (scientific, business and financial, artistic and literary etc.),
- complexity (simple or complicated),
- specification (well defined or poorly defined, and
- relationship to other problems in a larger system” (Laughlin, 2011, p. 3)

Problems have in *common*

- “involve proceedings by a series of permissible logical, mathematical, scientific, physical or linguistic operations from the current less desirable to the future more desirable state” (ibid. p. 3)

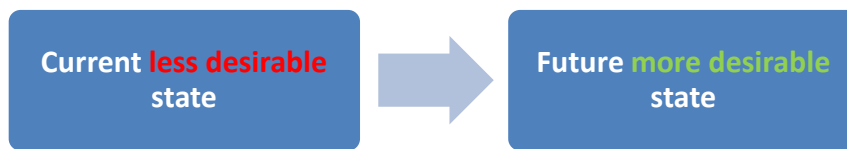


Figure 1-2: Decision Task

Regarding the correct *solution* to a specific problem Laughlin (2011, p. 6) distinguish between intellectual task and judgmental task.

Intellectual task: “to have demonstrably correct answer within mathematical, logical, scientific, or verbal conceptual system” (ibid., p. 5).

The goal of intellectual task is to find THIS *correct answer* as a group.

Judgmental task: “evaluative, behavioural, or aesthetic judgements, no objective (universally shared) basis of evaluation, potential group choices must, of necessity, be evaluated through social consensus” (ibid., p. 6).

The goal of judgmental task is to *achieve consensus* as a group.

To get to the accurate solution as a group several requirements are needed. According to Laughlin and Ellis (1986, cited in Laughlin, 1999, p. 6) a demonstrably correct solution must fulfil four conditions:

- 1) “Members must agree on a mathematical, scientific, logical, or verbal **system**.”
- 2) “Sufficient **information** has to be available to solve the problem.”
- 3) “Members must have sufficient **knowledge of the system** to recognize the correct answer if it is proposed by one or more group members”
- 4) “Members must have sufficient **ability, motivation** and **time** to demonstrate correct answers to the incorrect answers.”

As case studies revealed group decisions in organisational context include both of the above described task types and most of them embrace a mixture of them. For instance complex strategic decisions require mathematical calculations, estimations and personal opinions based on individual experience. Hence it is not possible to find the “correct” answer for multipart problem sets in organisational daily business. Moreover several interpersonal relationships influence that multipart process. In order to fulfil at least partly the aforementioned conditions for getting “correct” decisions, an organisation needs proper management to establish suitable systems and processes throughout the company. Hence group member’s activities will be guided in the right way for different decision tasks.

b) Decision-making context

Let us now examine the next input variable, decision-making context. When exploring group decision-making its surrounding fields have a major influence on its underlying processes that leads to final decision-making.

Thus a greater understanding of the contexts in which these group decisions occur is essential.

The present analysis provides that decision-making context is embraced by

- environmental,
- organisational and
- managerial factors

Environmental Context – Environmental Dynamism

Following Dess & Beard (1984, p. 53) environmental dynamism is characterized by the degree and the randomness of transformation in an organisation's external environment.

"Environmental dynamism implies " (...) "rapid and discontinuous change in demand, competitors, technology, or regulation so that information is often inaccurate, unavailable, or obsolete" (Bourgeois III & Eisenhardt, 1988, p. 16).

Environmental dynamism constitutes the most important context variable investigating the link between executive personality and their behaviour, because it directly constraints executive behaviour (i.e. the degree of comprehensiveness they can pursue given time and other constraints resulting from environmental dynamism. (Finkelstein & Hambrick, 1996, Simsek et al. 2010, cited in Sputtek, 2012)

This fact implies that whether and how group decisions are used by a manager for finding the "correct" solution depends highly on the environmental context and latitude of managers are limited due to not controllable events.

Organisational Context

My examination leads me to the following aspects that play a role when considering group decision-making in organisations:

- organisational structure
- organisational life-cycle
- corporate culture

Organisational Structure

Organisational decision-making is not taking place in a vacuum, but are embedded in existing organisational dimensions. For example the degree of formalization, centralization, specialization defines some of these dimensions. These framework conditions influence the decision-making process and the quality of each business decision in various ways. (Martin & Behrends, 1998, p. 1)

According to Martin & Behrends (1998, p. 5.) there are the following structure effects:

- structures regulate existing processes
- structures determine boundaries of the whole system
- structures stimulate the existence of specific processes while suppress others
- structures defines available channels between different areas, elements etc.
- structures establish the spectrum of interactions between the units

All of these points lead to the fact that organisational structure is an essential part in setting the framework for a company's processes. Besides the external fit between organisational structure and environment, the internal consistency of each structure dimension is important to reach internal fit and will be the centre of a manager's choices. (ibid., p. 14)

In order to achieve an internal fit of each organizational dimension, there exist according to Mintzberg (1992, cited in ibid., p. 19) four design parameters whereas the decision system is one of them.

As mentioned above the organisational structure of a company has major influence on its underlying processes, such as the decision process. A process is only efficient when there exists a proper fit between its organisational dimensions. These entire dimensions set proportions of one's behaviour, but are not an ultimate rule. It depends on how people especially managers deal with these structures and norms in organisations. (Martin & Behrends, 1998, p. 50ff.)

All these facts clarify that organisational structure and its conditions play a role in the whole decision process. So hierarchy and formal standards may determine to some degree the role and embodiment of group decision-making in an organisation and should be kept in mind when analysing group decisions.



Figure 1-3: Organisational Structure and Decision-Making

Organisational Life Cycle

Greiner (1972, cited in Martin & Behrends, p. 7) describes the development phases of organisations that influence the decision processes in a company. The figure below shows the five phases and their paradigms. Each phase depends on the age and size of an organisation.

Depending which development phase prevails, the communication, information and decision process patterns differ. Each stage has its specific demands/paradigms that lead to successful business and are fulfilled by different underlying processes. (Greiner, 1972, cited in *ibid.*, p .7)

1. At the beginning an organisation requires creativity and flexibility. That is best served with open and unbound communication and flexible management activities are needed that are oriented towards circumstances in the market. (*ibid.*, p. 7)
2. As activities and problems get more complex, functional organisational structure will be needed and specialists will support the top management team. The efficiency and uniformity of operational processes are formally determined and will be standardized. Important decisions will be made by top management which is trying to coordinate the different departments. (*ibid.*, p. 8)
3. Delegation of tasks will be the next aim of an organisation such as concentration on specific markets and its required fast and flexible actions. That will be reached by a decentral organisational structure whereas far-reaching competencies will be transferred to middle hierarchy level. The activities and tasks of top management will be mainly strategic. (*ibid.*, p. 9)

4. The next aim is the improved coordination of different departments. Problem specification, formal standardized decision-making procedure and efficient team work will be in the focus. (ibid., p. 9)
5. In order to support the underlying procedures there has to exist sufficient team spirit in the company. The establishment of various informal and direct contact possibilities between employees of different departments will be important. For instance new interdisciplinary teams are the key to an increased proportion of direct and open communication throughout the company. In addition idea and information exchange will be easier between various experts and the exploitation of the creative potential will support new innovation processes throughout the company. (ibid., p. 9)

As a result the organisational life cycle and its accompanied organisational structure have a major influence whether and how group decisions are part of a decision process. There is no doubt that in big firms group decisions are a *conditio sine qua non* for a good management.

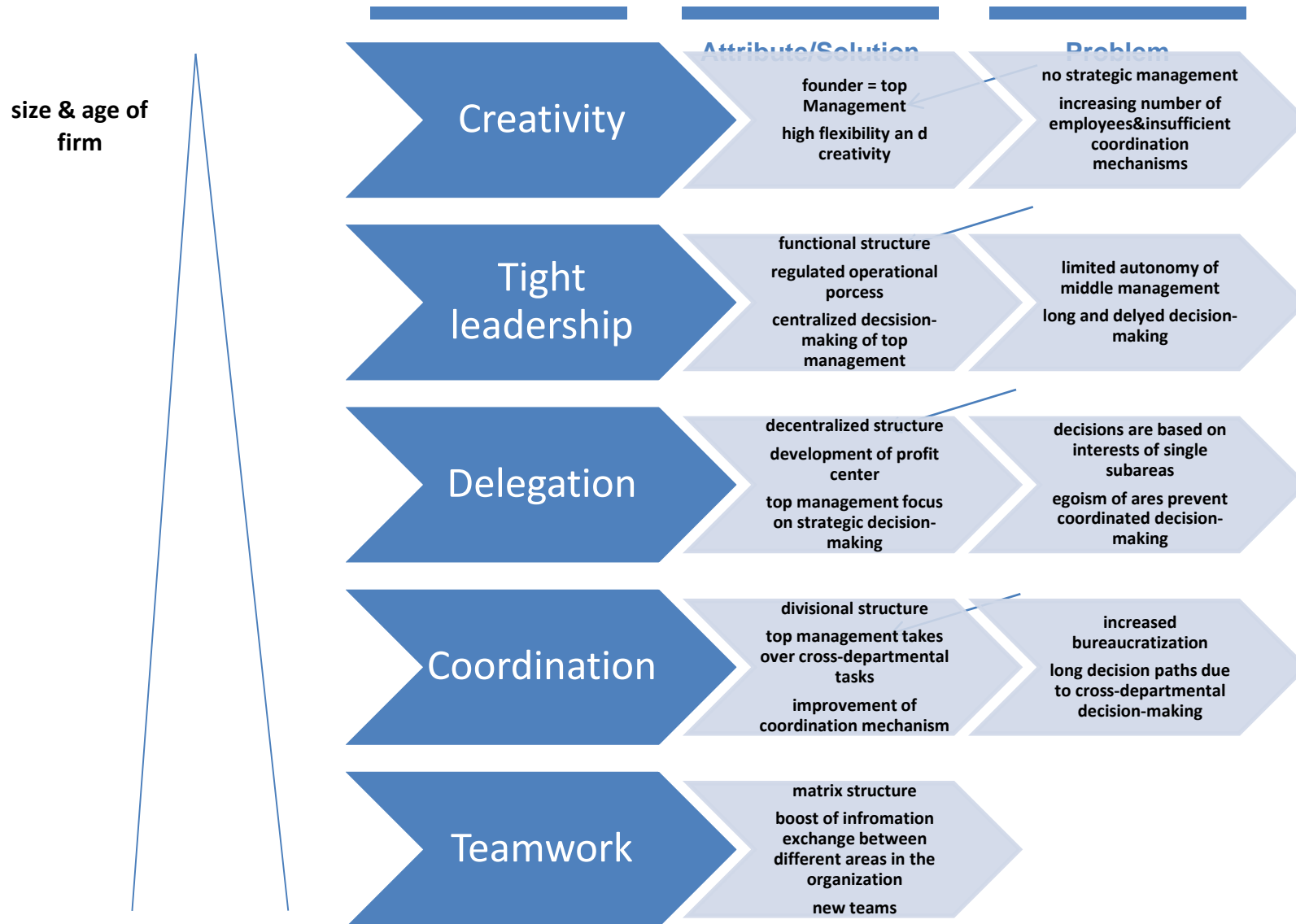


Figure 1-4: Organisational Life Cycle and Role of Group Decision-making (modified from Martin & Behrends, 1998, p. 12.)

Managerial Context

A certain decision problem has different situational factors that are interdependent. Köhler (1992, p. 31) describes managerial context with the following attributes

- decision field,
- decision content (limited to elements of management),
- specific managerial decision maxim on which decision maker or group relies on
- decision maker/s and it/s decision authority derived from organisational structure

Figure 1-5 illustrates certain decision situations and the possible involvement of certain decision groups. (Laux, 1979, p. 6f.)

1. Individual person (e.g. head of company, business unit head) = Manager makes decision by himself OR
2. Manager delegates decision authority to another person OR
3. Manager delegates decision authority to committee (he determines members of the group, aim for decision, decision-making rule for the group)
 - i. Specific decision- making group or committee
 - ii. One whole department
 - iii. All Business Unit Heads
 - iv. Various persons mixture of vertical/horizontal unit

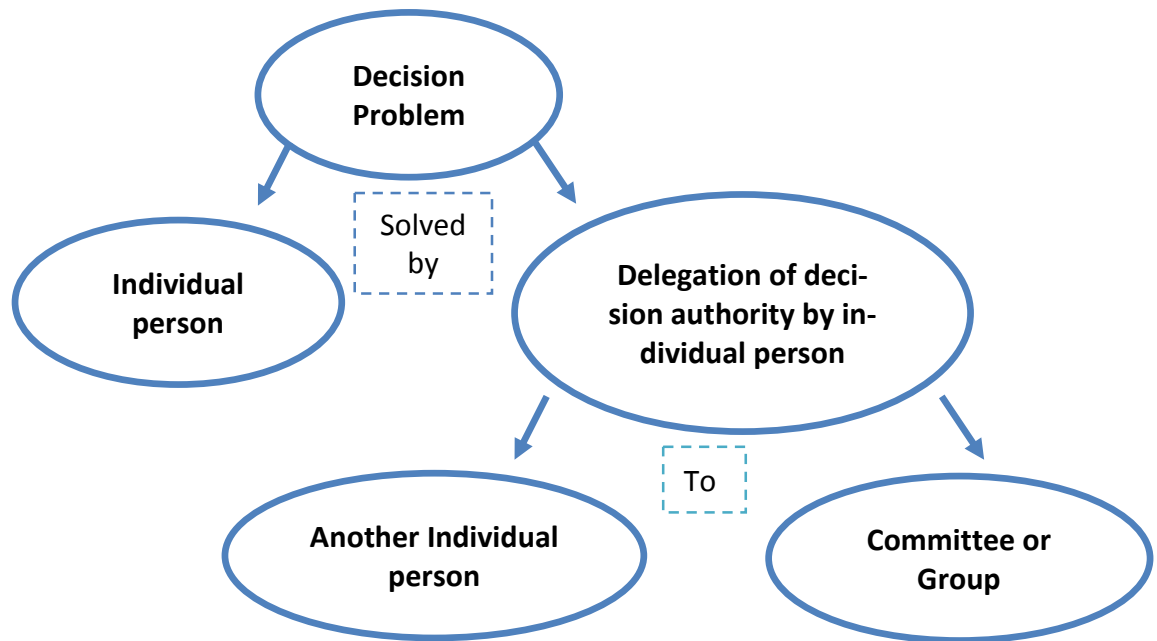


Figure 1-5: Decision Situation

According to Laux (1979, p. 6f.) the manager faces a delegation problem. Should the leader choose the alternatives by himself? Which members should be involved in decision-making? Which decision-making rule is appropriate for the group? What will be the benefit of group decision-making? Does the group has better qualification and delivers more information than an individual person for regarded decision task?

Vroom and Yetton (1973, p. 73) states that characteristics of the decision task have a major influence on the choice of the manager "WHEN and HOW subordinates (individuals, groups or teams) participate in decision-making and are involved in the solution of the regarded decision task." According to them there exist seven situational variables that impact the decision of one's manager decision style. Vroom and Yetton (1973, p. 73ff.) present them as seven rules which define the "feasible set of decision processes applicable to a given problem" and summarize the above mentioned motives using group decision-making for solving a problem. Three rules are concerned with the protection of the quality of the decision, whereas the other four place its focus on the acceptance.

1. Information Rule: leader does not have enough information to solve the problem by himself and the quality of decision is crucial for the organisation

2. Trust rule: if you trust your subordinates or not (and the quality of decision is crucial for the organisation); no group decision

3. Unstructured problem rule: The decision problem is unstructured and leader does not have required information (and the quality of decision is crucial for the organisation)

4. The acceptance rule: acceptance of autocratic decision-making style is doubtful to be accepted by subordinates and acceptance is critical to the implementation of decision

5. Conflict rule: if subordinates are very likely to disagree or challenge the appropriate solution and acceptance is critical to the implementation of decision

6. Fairness rule: if quality not important but its acceptance very precarious, only GD

7. Acceptance priority rule: acceptance critical and subordinates can be trusted only group decision. (ibid., p. 145)

Their studies identified following motives for managers using groups for finding the solution of the regarded decision task.

- Manager requires information to solve problem
- Problem is very unstructured and not well defined
- Team members acceptance of solution is very critical for successful implementation
- Enough time available (ibid., p. 148)

The role of the manager has a central part in group decision-making. A leader knows the tools and processes in an organisation and uses them for goal achievement. Whereas the decision-making styles of managers may differ.

“The central thesis is that the aspects of leadership style, which are reflected in leaders’ choices about the amount of opportunity provided their subordinates to participate in making decisions, **vary not only among leaders, as has been suggested in existing literature, but also within a single leader**” (ibid., p. 73).

The environmental, organisational and managerial factors influence the organisational mechanisms in general. Certain decision tasks have a unique decision-making context where all these dynamics occur and impact the whole decision process.

One important issue of group decision-making is to select the right group members that support from Laughlin and Ellis (1986, cited in Laughlin, 1999, p. 6) mentioned four required conditions for correct in order to have good problem solving ambitions as an organisation.

In addition the organisational structure must work in/adapt to every environmental context. As a result the organisation will be able to solve complex problem sets, make “correct” decisions and continuous improvement.

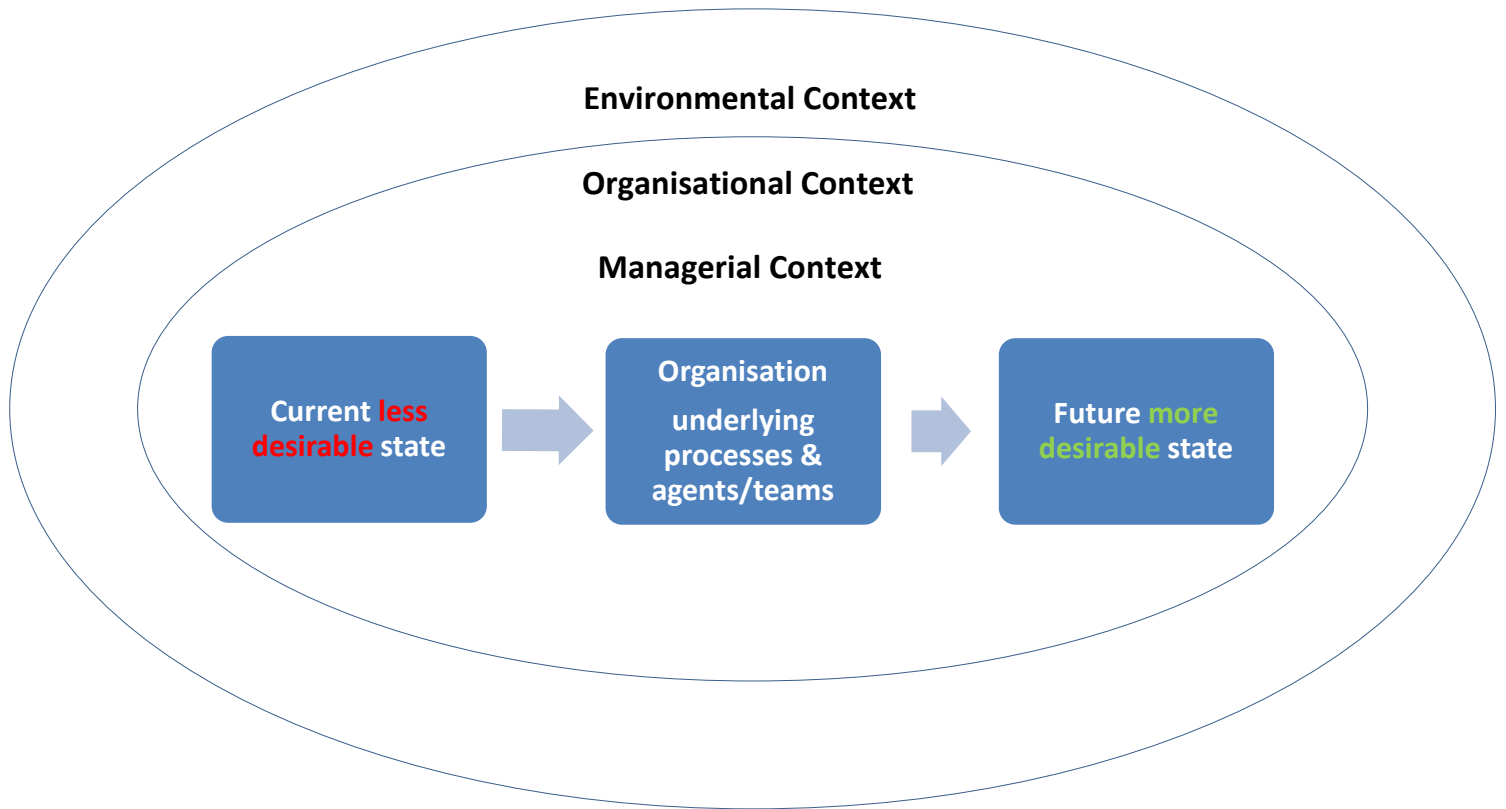


Figure 1-6: Decision-making Context

c) Group Characteristics

Baron, Kerr & Miller (1992, p. 5ff.) describe group characteristics with the following parameters, whereas group structure is one important dimension with various subgroups.

- **Group size:** is self-explanatory and has big influence on communication behaviour
- **Group structure:** describes how the group is organised and how members are related. (E.g. status differences among members, subgroups, coalition etc.)
 - Roles: “(...) expected behaviours associated with a given position within a group” (ibid., p. 5).
 - Status: “(...) is generally a function of the degree to which an individual’s contribution is crucial to the success (and prestige) of the group and how much power (control over group outcomes) that individual has. High status individuals are likely to be valued and treated by the group more tolerantly” (ibid., p.7).
 - Moreover high status members “(...) have a disproportionately high strong impact on group decisions and judgments, whereas those low in status tend to be ignored, even when they offer intelligent and creative advice” (ibid., p. 8).
 - Subgroups: “(...) based on similar age, place, social role, vested interest etc.” (ibid., p. 8).
 - Cohesion: “(...) overall strength of positive relationships within the group” (ibid., p. 8). E.g. group members just like each other, achieving a crucial goal
 - Communication networks: refers to the type of communication patterns
- **Group Norms and Leadership:** “(...) coalescing concerns the building of group relationships when decision rules, influence, interpersonal relations, leadership, aspirations, and issues are determined. The group leader must emerge or be identified by an appropriate power figure to have the necessary legitimization to provide group leadership.” (Delbecq, Van de Ven & Gustafson, cited in Nutt, 1989, p. 89).

When investigating group decision-making I will not consider all of aforementioned factors of group characteristics. My focus will be on group size and group structure, who are the members and how are they related. Thus I will depict the following parameters

- group size

- group name/type
- field of activity in company of each member
- communication behaviour
- personal interests and group cohesiveness
- and decision power of each member

Most of the aforesaid factors are self-explanatory. Some terms will be clarified.

Group Types/forms (in organisations)

The present study reveals many different types of teams and groups occurring in companies for solving decision problems. For instance, TMT, several Executive Teams (consisting of Directors, SVP, Senior Managers, General Managers etc.), Trust Boards, Review Boards, Committees. Besides these mentioned entities Laughlin (2011, p. 82) and Brodbeck, Kerschreiter & Schul-Hardt (2007, p. 459) state that the following designs are possible.

- Committees
- Expert Boards
- Commissions
- Project groups
- Advice teams
- Think tanks (Hackman, 1990; Sundstorm, De Meuse, & Futrell, 1990, cited in Brodbeck et al. 2007)
- Multidisciplinary and multifunctional teams (Jackson, 1992, cited in Brodbeck et al. 2007)

Communication behaviour of group members

Following factors influence the magnitude and manner of communication among group members during the decision-making process: (Burnstein & Berbaum, 1983, p. 551)

- group size
- status of disagreement among group members
- member heterogeneity
- diversity of information and

- scripts available to them.

“(...) diversity of information and scripts is a function of member heterogeneity” (ibid., p. 553). For instance differences in background, knowledge, and personality have the tendency to lead to more in-depth and comprehensive analysis for a certain decision. Moreover heterogeneity fosters more assured and “extreme” decision. (Hoffman 1979, Myers & Lamm 1976, cited in ibid., p. 553)

Regarding the communication behaviour of group members there generally exist active and non- active participants. Some members are so called opinion leaders and they are accountable for most part of the ongoing communication. Others barely start a conversation with the rest of the group. (ibid., p. 552ff.) For example discrepancy in a group stimulates the magnitude of communication from the majority to the minority, in particular in cohesive groups regarding an important issue (Schachter, 1951, cited in ibid., p. 552). Predetermined norms, rules or procedural scripts could be one way to boost communication and increase member’s participation (ibid., p. 553). For instance if group members do not know each other well and have only few working experience together their inputs to decision-making will be harmed. For these situations predetermined scripts will improve part-taking. (ibid., p. 551)

Group Cohesiveness and Personal Interests

Executives in organisations are responsible for running the organisation and making business decisions. These leaders have various qualifications and distinct goals that may be different from those of the owners. The owners, the shareholder face a delegation problem. Should they make decisions on their own or should they delegate them to expertise, the management group? On the one hand managers have exquisite knowledge and information about the company. On the other hand managers may follow other objectives than their shareholders. Not only personal objectives of members of the management team may differ, but, diverse valuation of the quality of the decision will be present due to individual ratings of the decision situation and its influencing factors. The level of activity together with personal interests is a crucial dynamic of a manager's mind-set when choosing the “right” alternative for the final decision. In making business decisions, a manager’s support for a certain alternative could be linked to a gain in prestige and status. Moreover

well-grounded private interests such as expansion of his own area of activity or scope of power may tempt the manager to act in favour of a specific alternative.

The final output of group decision-making is the product of joint level activity of the managers and some uncontrollable dynamics. The misbehaviour of the agents (managers) cannot be monitored by the principal (owner, shareholder), or at least not without cost. That phenomenon is known as *moral hazard*. (Lindstädt, 2001, p. 1)

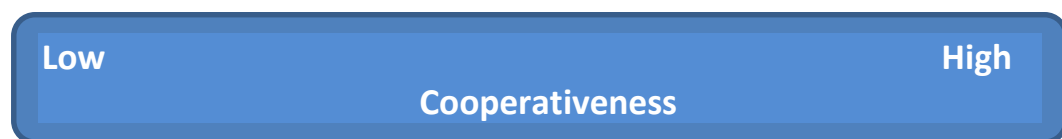
The above described event of the delegation of management decision from the owner/shareholders to a decision board (top management group) exemplifies every delegated management decision to a group. Whenever a decision or activity will be delegated from a manager to a group of other people in the company this problem (moral hazard) will occur.

Considering group cohesiveness the mentioned aspects of Laughlin (2011) and Fandel et al. (1997) play a role in group decision-making and make the problem of personal interests less or more severe. Laughlin (2011, p. 53) distinguishes between *cooperative interaction* and *mixed-motive interaction* among the group members. Where the former states that all group members have the same goal or objective and the latter reveal that group members have different goals.

In addition group member's attitude such as assertiveness and cooperativeness has a key influence on the resulting decision-making process (Fandel & Gal, 1997, p. 129).

- Assertiveness: satisfaction of one's own concerns
- Cooperativeness: tendency to satisfy others

According to Fandel & Gal (1997, p. 130) these two aspects of group decision-making describe the decision situation of each group member. Besides their propositions show in which decision situations joint problem solving is most applicable.



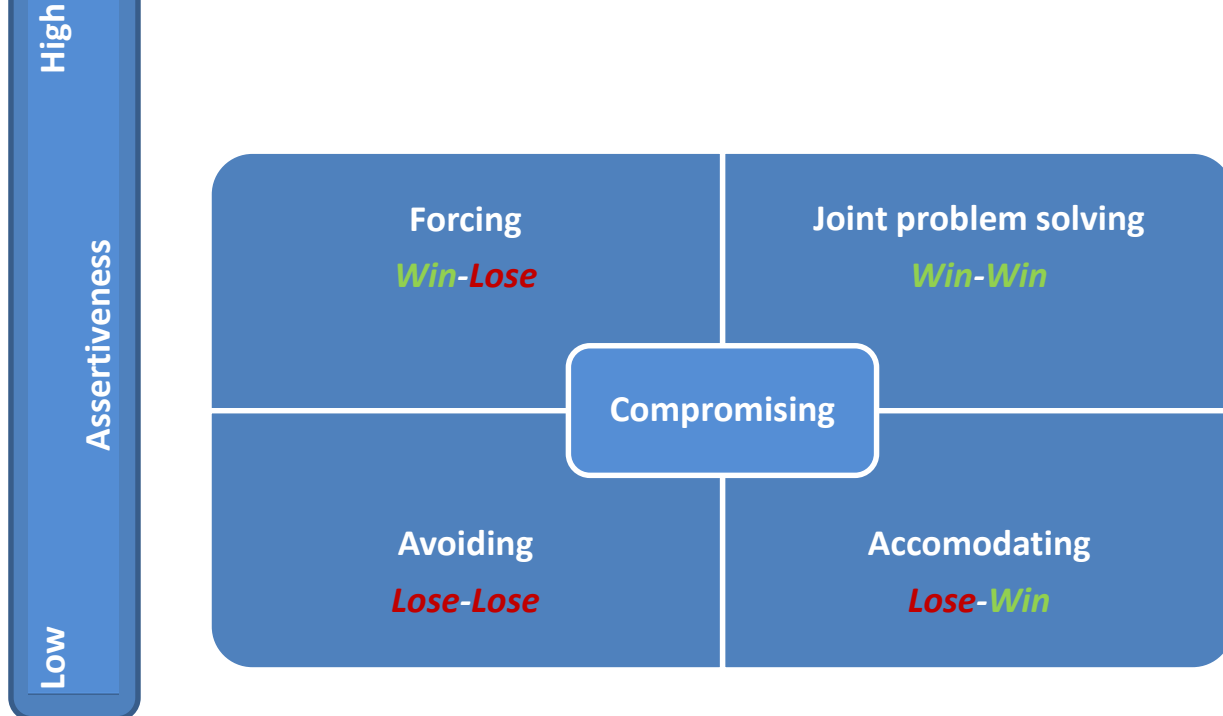


Figure 1-7: Joint Problem Solving (modified from Fandel et al., 1994)

Various decisions contain decision makers that have multiple aims. The decision-making entity has mutual aims but some interests can be different. Fandel states that “(...) the basic trend in the cooperative decision-making is to transform a possible conflict to a joint problem” (ibid., p. 55).

The aim of organisations is to restructure relations between team members in order to avoid winners or losers. The focus must be on developing a more cooperative interaction. Fandel et al. (1994, p. 56) proposes that all group members should be satisfied with the final decision.

“A cooperative process leads to defining of conflicting interests as a mutual problem to be solved by collaborative effort. It facilitates the recognition of the legitimacy of each other’s interests and the necessity of searching for a solution that is responsive to the needs of all. It tends to limit rather than expand the scope of conflicting interests.” (ibid., p. 56)

Decision Power

Decision power of each group member

Members with voting power are persons with voting rights. Members with no voting power are persons who are involved in the decision process, but are not entitled to vote (Laux, 1979, p. 271).

Studies show that performers have dissimilar levels of decision power within the company during a decision-making process and that powerful opinion leaders are responsible for final decision-making (Hinings et al., 1974, Pennings & Schneck, 1974; March,

1962, Salancik & Pfeffer, 1974, cited in Sputtek, 2011, p. 3). Although the top management team is per characterization a decision-making unit, the level of individual member's power differs, with the CEO possibly having the strongest influence (Hambrick, 2007, Hambrick & Mason, 1984, cited in Sputtek, 2011, p. 3).

Decision power as a group

As explained in section "organisational structure", group decision-making is embraced by the organisational context such as formal/informal organisation structure (e.g. approval of higher hierarchy level is required or not). This fact has a major impact on the whole decision process, such as influencing alternatives search and selection process of each group member and the whole group together. Moreover the decision group may not have the power to oblige the company to a certain action. So it is crucial for us to know who is responsible for the final approval of the decision and who inhibits veto power as well as to get details of the authorization routine. (Burnstein et al., 1983, p. 550)

Personal Interest, Communication & Decision Power

Following personal interests group members tend to persuade other members or friendship between members influences their perception about suggested alternative. These interest patterns determine communication among group members. For instance discussion between "friends" tends to be more easy-going and informal. Moreover the status of each group member has a high impact on the choice of the final solution. As a result high-status members are informal decision leaders of the group. (Cohen, 1958, Kelley, 1951, cited in *ibid.*, p. 555ff.) Low ranking members with an unsecured position in the group, will not dare to oppose higher status member (Dittes & Kelley, 1956, Jackson & Saltzstein, 1958, cited in *ibid.*, p. 555).

It follows that personal interest, decision-power as well as the informal status system of group decision-making are interrelated and determine the communication behaviour and pattern of a decision-making entity.

d) Effectiveness of Teams

"When representatives from all of the relevant areas of expertise are brought together, **team decisions** and actions are more likely to encompass the full range of perspectives and issues that might

affect the success of a collective venture. Multidisciplinary teams are therefore an attractive organizing option when individuals possess different information, knowledge, and expertise that bear on a complex problem or issue". (Van der Vegt & Bunderson, 2005, p. 532)

The question is whether managers are able to take advantage of the full potential of their interdisciplinary teams. Hence a team that has a high degree of information sharing and a sense of collective identity will act and decide in a beneficial way (ibid., p. 532.)

The head of People Operations department pointed out that rather the interaction behaviour of group members (HOW) is the key to success, and not WHO the members are –

"We think we need superstars. (...) You can take a team of average performers, and if you teach them to interact in the right way, they'll do things no superstar could ever accomplish. And there are other myths, like sales teams should be run differently than engineering teams, or the best teams need to achieve consensus around everything, or high-performing teams need to get a high volume of work to stay engaged, or teams need to be physically located together. (...) It is important that everyone on a team feels like they have a voice, but whether they actually **get to vote on things or make decisions** turns out not to matter much. (...) What matters is **having a voice and social sensitivity**." (Duhigg, 2016, p. 65f.)

"Putting ten smart people in a room did not mean they solved problems more intelligently. In fact, those smart people were often outperformed by groups consisting of people who had scored lower on intellect test, but still seemed smarter as a group." (ibid., p. 59f.)

In other words most successful groups at Google established norms that lead to beneficial group interaction and hence increase the collective intelligence of the group. The appropriate norms can make a team smarter, whereas the wrong norms may hinder the development of outperforming group intelligence. This brainpower belongs to the group and not to the individuals of the group that is accomplished with the right way how the group members treat one another. (ibid., p. 60)

Most importantly these favourable conditions are universally true for different settings and groups. Some group norms of investment bankers may be different from managing nurses, but both groups will act in a favourable way, when honest discussion is executed, group members have equal voices and social sensitivity for group members feeling exist, creating the most advantageous group norm "*psychological safety*". (ibid., p. 69)

Another point to mention is that teams are an "amplification of their internal culture" and they need time to develop in order to be as a group able making productive problem solving (ibid., p. 69).



Figure 1-8: Psychological Safety (condition for beneficial group decisions (modified from Duhigg, 2016, p. 66)

At Google a research team focused on finding the optimal composition of a team with different kinds of people or backgrounds. Their literature review showed that scientists suggest different aspects that have an influence on team effectiveness. Their findings are manifold. (ibid., p. 43)

„Some scientists had found that teams functioned best when they contained a concentration of people with similar levels of extroversion and introversion, while others had found that a balance personality was key. There were studies about the importance of teammate having similar tastes and hobbies, and others lauding diversity within groups. Some research suggested that teams needed people who like to collaborate; others said groups were more successful when individuals had healthy rivalries. Literature was all over the place.” (ibid., p. 43)

Researches at Google were analysing 180 teams from all over the organisation, but none of the above mentioned factors such as gender, personality, expertise of group members or the time group members are spending together inside and outside the company etc. had an impact on group effectiveness. What matters is not the WHO, but HOW teams communicate and interact with each other. (ibid., p. 44)

Google’s research group came to the conclusion that certain **group norms** about appropriate behaviour are the key to success. These unwritten rules guide a group how it should function. (ibid., p. 45)

“When a team comes to an unspoken consensus that avoiding disagreement is more valuable than debate, that’s a norm asserting itself. If a team develops a culture that encourages differences in opinions and spurns groupthink, that’s another norm holding sway. Team members might behave certain ways as individuals – they may chafe against authority or prefer working independently—but often, inside a group, there’s a set of norms that override those preferences.” (ibid., p. 45)

Which *norms* are required for effective group interaction? According to the findings at Google the following five group norms are advantageous for the effectiveness of a group: (ibid., p. 66)

1. “Teams need to believe that their work is important.”
2. “Teams need to feel their work is personally meaningful.”
3. “Teams need clear goals and defined roles.”
4. “Team members need to know they can depend on one another.”
5. “But most important, teams need psychological safety.”

The following example shows the importance of the group norm “*psychological safety*”: According to a study of Edmonson (1996) comparing to different wards of a hospital (orthopedic and cardiac) not team cohesion, rather team culture and its developed norms matter. These departments had different cultures and had differences in their error rates. In the orthopaedic ward nurse managers wore business suits and emphasize formal behaviour and communication and this ward reported one error every three weeks. In contrast nurses and doctors of the cardiac department (reported every day one error) were very chatty and informal. First researches measured team cohesion of each department (measured satisfaction, happiness, and self-motivation of each group) and monitored them for two months. Surprisingly the ward with the strongest team cohesion made far more errors. The question is why would strong teams make more mistakes? It was not the case that nurses that belonged to a strong team actually make more mistakes; rather these nurses felt more secure signalling when making an error. (ibid., p. 48) The data showed that one special norm – “whether people were punished for a misstep – influenced if they were honest after they screwed up” (ibid., p. 48). Although on the surface team cohesion was strong at the orthopaedic team; “the ward prides itself being of being clean, neat and having an appearance of professionalism. The employees said that they appreciated the manager’s professionalism, were proud of their department and felt strong sense of unity” (ibid., p. 49), but managers, doctors and nurses would not dare to admit making a mistake and leaders were talking sharply if things went wrong.

Hence this established culture did not foster organisational learning. Alternatively in the cardiac ward nurse managers mentioned “there is an unspoken rule here to help each other and check each other” (ibid., p. 49).

Edmonson (1996) concluded that “psychological safety” is the key to success; meaning “shared belief, held by members of a team, that the group is a safe place for taking risks. It is a sense of confidence that the team will not embarrass, reject, or punish someone for speaking up.” (ibid., p. 50)

Likewise at Google’s data reveal the norm “psychological safety” is part of the most successful teams at Google – “allowing others to fail without repercussions, respecting divergent opinions, feeling free to question others’ choices but also trusting that people aren’t to undermine your” (ibid., p. 51) – these facets describe this beneficial norm.

Nonetheless in organisations such as Google, its teams need norms that foster critical and challenging debates.

In order to create psychological safety another ingredient is necessary, namely equal voices. Group members have the opportunity to speak up. They are not interrupted by other group members and can talk about their own emotions. Leaders at Google reveal that modeling norms as a leader is the most important responsibility. (ibid., p. 64)

At Google an engineer of one of the most effective teams stated that his team leader “is direct and straightforward, which creates a safe space to take risk...” In contrast a group leader with “poor emotional control” has bad performance with his team. (ibid., p. 45)

Role of the group leader

The team leader plays a major role in this context because he/she is the one who can set appropriate rules for the team. The group leader is the modelling part in creating the norm “psychological safety” of a group. Above all a good leader has to be aware that he/she has to give control to all team members. At Google the checklists contain the following points: (ibid., p. 66f.)

- “Leaders should not interrupt teammates during conversations, because that will establish an interrupting norm.
- Leaders should demonstrate they are listening by summarizing what people said
- They should admit what they don’ know.
- They should encourage people who are upset to express their frustrations, and encourage teammates to respond in non-judgmental ways.

- They should call out intergroup conflicts and resolve them through open discussion
- They should not end a meeting until all team members have spoken at least once.”

Nonetheless every group is different. Put differently some groups such as sales teams have the tendency to fight debate and battle for their point of views. Then again the appropriate norms make different opinions and arguments of group members productive in this context.

1.3.2 PROCESS variables

a) Decision Process

Phase Schemata

Literature describes various decision process phase/stage schemata that are quite similar but differ in their complexity (Burnstein et al., 1983, p. 532). The model of Bale (1950) was one of the first studies describing the stages of group decision-making and its participating members during a time period. He defined the following stages: (cited in *ibid.*, p. 533ff.)

- orientation (which issue is addressed by the group)
- evaluation (register possible solutions)
- control (reduce solution set and make final choice)

According to Simon (1960, cited in Laux) the following phases are predetermining.

- Recognition and Formulation of the problem (intelligence activity)
- Search and elaboration of alternative solutions (design activity)
- Decision-making, choice of advantageous solution (choice activity)

Additionally Cyert and March (1963) and Mintzberg (1976) focused their research on problem solving groups in large organisations and determined similar steps of decision-making: (cited in Burnstein et al., p.535)

- identification : recognition and diagnosis
- development: search and design
- selection: screening, evaluation and authorization

These three stages are characterized by their underlying sub processes. However structured decision processes are not chronological in daily business, which is especially true for unstructured decision-making. Particularly for groups exist very complex and interdependent procedures and routines. (Burnstein et al., 1983, p. 535)

Nevertheless final decisions can only be made when specific decision preparing phases are finished. Let's take a closer look on Cyert and March's (1963) steps of group decision-making (cited in *ibid.*, p. 535)

Identification (recognition and diagnosis)

The identification phases are divided into steps, the *recognition* and the *diagnosis* activity. First of all group members have to be aware that there has to be made a decision. In order to classify the type and its reasons a comprehensive analysis has to be carried out. (*ibid.*, p. 536f.)

Development (search and design)

The Development phase is concerned with finding solutions for the regarded decision task. It starts with the *search* procedure finding appropriate and sophisticated road maps for final solution in a timely fashion. During this phase the management group scans its memory mind-sets and decides whether to examine a widespread knowledge field or to regard a narrow scope. These search strategies are called "progressive deepening" or "scan-search" and "in-depth search". (Newell & Simon, 1972, cited in *ibid.*, p. 541f.) The second stage, the *design* activity deals with defining concrete alternatives for the final choice. Moreover external entities could be assigned to help getting comprehensive analysis of relevant alternatives, whereas hierarchical and familiar sources are being used. (*ibid.*, p. 541f.)

Selection (screening, evaluation and authorization)

The selection routine is made up of three stages, *screening*, *evaluation* and *authorization*. These steps are iterative and involve in-depth analysis of relevant options for final decision-making. The decision-making group is affected by the first two steps, whereas the third routine is determined by the organisational context. For instance the decision made by the agents needs the final approval of a higher hierarchy level. As previously discussed chapter 5.2, b) "decision-making context" the organisational framework and its well-defined limits has a significant influence on decision-making process. (*ibid.*, p. 542)

After the detection of a decision problem the information activities are taking place. The decision group is confronted with an information overload. In order to handle it, agents will start with the *screening* process. (Anderson, 1980; Cyert & March, 1936, Soelberg, 1967; Zajonic & Smoke, 1959, cited in *ibid.*, p. 548ff.) Information will be reduced and

summarized; inadequate alternatives will be removed until the best solution will remain for the group. The single phases are overlapping and previous stages such as the search routine implies the next activity, the information screening. (ibid., p. 548ff)

Evaluation courses of action have high importance especially when more than one alternative is part of the short-list of the group and members value these options differently (Burnstein et al., 1983, p. 549).

The last step in decision-making process may be the *authorization* stage. In some cases the decision-making group has not the power to oblige the company to certain activities. Some other entities positioned higher in the hierarchy have veto power and their final approval is required for the final decision. The awareness of the decision group that there exist agents authorizing the group decision may have an influence on the behaviour of each group member during the joint decision-making process. For example subordinated decision groups will not hand over a lot of innovative recommendations to higher hierarchy knowing that a very conservative leadership team will be responsible for the final authorization. (ibid., p. 550)

The above described phase schemata of Cyert and March (1963, cited in Kirsch, 1971, p. 72ff.) give a good overview of the group decision process. Certainly these sequences show only a tendency of the “right” order of the stages. Besides sub processes of group decision-making could partly be parallel. As a result a deductively strict phase scheme is unrealistic. Due to empirical evidence other authors suggest that the decision phase theorem is not true for multi-personal decisions. (Witte, 1968 & Kirsch 1971)

Exogenous, Endogenous and Cognitive Cycles

When analysing group decision processes, one should be aware that the occurrence of certain events triggers interruption, moving and returning from one stage to a previous stage etc. These events can be described by *exogenous, endogenous or cognitive cycles* (Burnstein et al., 1983, p. 556f.).

exogenous cycle

In daily business decision-making groups are discontinued by various incidents that delay the decision-making process and lead to repetition of a previous activity step. For instance one event could be a cost overrun in a certain project. (ibid., p. 557)

endogenous cycle

The flow of activities of endogenous cycles is broken due to reasons that are taking place within the group and initiate iteration between decision steps. Task elements, turn-over in membership or rejection in the authorization routine are responsible for returning to prior stages. (ibid., p. 557)

cognitive cycle

In this case the course of action of a decision-making group is delayed due to cognitive factors such as expectations of group members being betrayed by competitive manners of other agents (Kelley & Stahelski, 1970, cited in ibid., p. 557)

Contingency Variables

The decision processes in its occurrences vary as follows. How many cycles are taking place, which decision paths, their order and their number performed by the decision group and implicit group activities vary dependent on contingency variables. They are described above as “Input variables”. Hirokawa & Poole (1996, p. 218) listed the following contingency variables:

- task characteristics (Poole 1983b; Poole & Roth, 1989b, cited in ibid.)
- degree of conflict in decision (Mintzberg et al., 1976; Poole & Roth, 1989b, cited in ibid.)
- group composition (Sorensen 1971, cited in ibid.)
- group size (Poole & Roth, 1989b, cited in ibid.)
- group cohesiveness (Poole & Roth, 1989b, cited in ibid.)

For instance the numbers of cycles differ with task complexity, while task complexity is a function of familiarity, complexity and time pressure (Segal, 1982, cited in ibid., p. 233).

Theories of group problem solving regard “analogies to some models of individual problem solving” (Bales, 1950; Davis, 1975, Mintzberg et al., 1976; Steiner, 1972, cited in Burnstein et al., 1983, p. 532f) or make the assumption that the group decision embodies “an aggregation of the individual decisions which themselves conform to such a model” (Anderson & Graesser, 1976, Bishop and Myers, 1974; Davis, 1973; Vinokur & Burnstein, 1974, cited in ibid. p. 533).

Above mentioned theories do not consider time relevant conditions in organisations during decision-making processes. Moreover an aggregation procedure such as majority vote is not considered in most of cases (ibid., p. 532f.).

Model of Group Decision-making Processes

The final model of group decision-making incorporates/captures all relevant aspects of group decision-making and that is why it is in the centre of the further analysis. First the individual problem solving situation and the aggregation procedure of individual decisions which leads to the final group decisions are part of Laux's (1979, p. 71) examined joint decision-making process. Moreover the model combines the link between the joint problem solving and the organisational context. So it has practical relevance for companies.

The figure 1-9 illustrates a comprehensive overview of group decision-making. It gives insights into an individual information processing system embedded in the group decision process. As shown in the picture the input variables of a group decision-making process influences the individual behaviour and the preference order. The way of information procurement and exchange, discussion behaviour of each group member will vary with group size, given information sources, type of alternatives, predetermined voting procedure and personal traits. (ibid., p. 71)

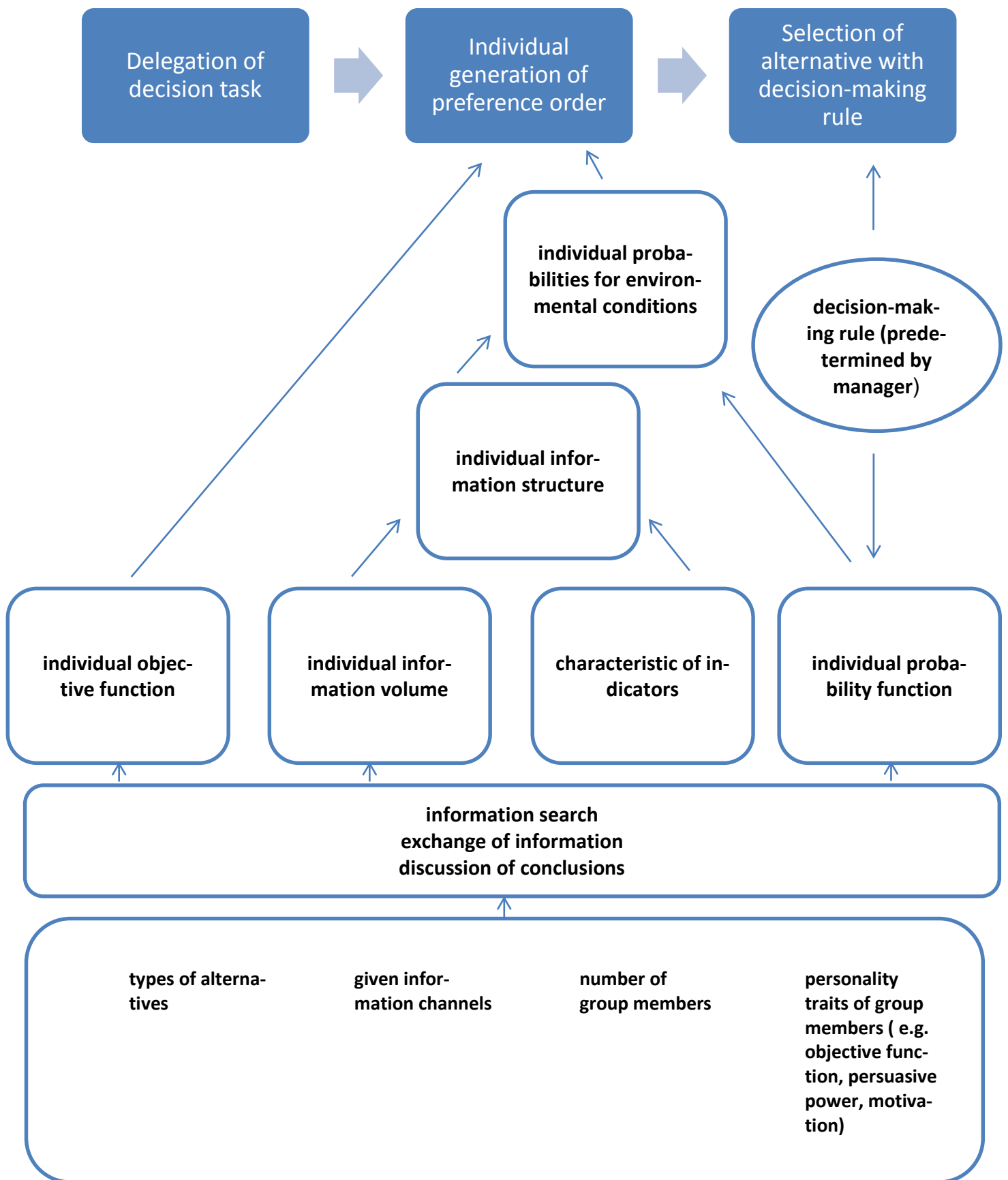


Figure 1-9: Group Decision Process (modified from Laux, 1979, p. 44)

Conclusion Group Decision Process

Decision-processes are very complex in their nature. As previously discussed, decision stages influence each other and many parameters such as group characteristics, decision task, and organisational context are interrelated. With the help of the ensuing illustrations of important characteristics of decision processes, one should get a meaningful overview of the whole group decision process. Subsequently it simplifies the analysis of its sequences.

First of all one has to consider the stages of a group decision-making process. However these stage schemata are not as chronological in daily business, which is especially true for unstructured decision-making. As aforementioned according to Burnstein and Berbaum (1983, p. 556ff.) the decision-making process is surrounded by various cycling patterns meaning that specific events will interrupt progress toward a solution and cause a group to reanalyse the decision problem and that the group has to return to a previous stage.

Finally Laux (1979) model integrates the individual decision-making routine of each member in the general group decision-making process embedded in the organisational context.

b) Information Process

The subsequent two information stages

information distribution **prior** to group decision-making and

processing of information **during** group decision-making

as well as their asymmetries have to be considered while their interplay has an impact on decision quality and other related variables (Brodbeck et al., 2007, p. 461ff.).

Information distribution prior to group decision-making

Group information set

The individual information set encloses overlapping (shared) and unique (unshared) information. The sum of all individual information sets is the total information available to the group. The crucial point is whether this total information set has the same decisional implication as the group member's individual information set or not. The question is, whether the whole group with its pooled knowledge could outperform an individual with its knowledge in decision-making. (ibid., p. 461ff.)

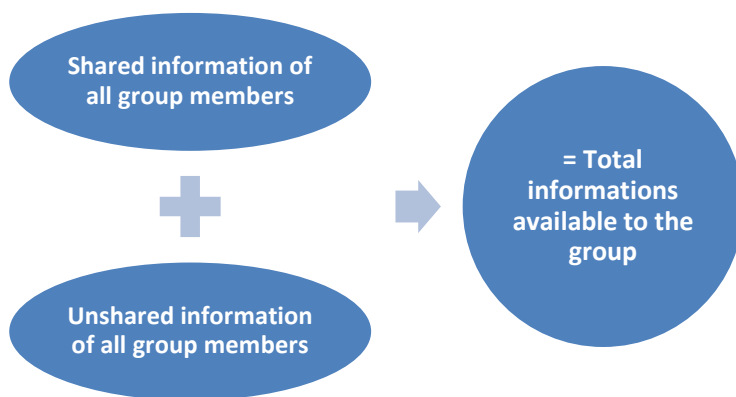


Figure 1-10: Information Set of Group

Asymmetric and Symmetric Information Distribution among Group Members

When regarding this state of information distributions prior to decision-making two options of information distribution among group members are possible (ibid., p. 461):

1. **Symmetric information distribution – manifest profile** (Lavery, Franz, Winquist & Larson, 1999, cited in ibid., p. 461)

“No matter how (biased) the group members exchange information (or not), the distribution of their individual preferences suffices to derive the correct (best informed) decision. Under conditions of a manifest profile, the discussion of unshared information can promote cross-fertilization and learning of new information, thereby boarding groups member’s individual knowledge, but it is not critical to the group’s decision quality.” (ibid., p. 461)

2. **Asymmetric information distribution – hidden profile** (Stasser, 1988, cited in ibid., p. 461)

“The best informed decision alternative is hidden from individual group members prior to discussion. Logically, hidden profiles can only occur if shared information and unshared information have different decisional implications and if the unshared information points to be the best choice. If hidden profiles exist, the group will make the correct decision by pooling and integrating unshared information during discussion.” (ibid., p. 462)

“With regard to decision quality, hidden profiles are particularly important because they represent the prototype of situations in which groups have the potential to outperform individual decision makers and social combinations of individual preferences (e.g. by voting)” (ibid., p. 462).

In existence of fully shared information a simple voting procedure or individual decision-making is satisfactory for high quality decision-making when regarding the information perspective. Except there exist other motives such as the need for high acceptance and commitment to the decisional consequences etc. for using group discussion. (ibid., p. 472)

See Section 1.3.3 “outcome” for brief overview of various reasons for group decision-making.

Information processing during group decision-making

According to Brodbeck et al. (2007, p. 462) and experimental literature about group decision there exist various asymmetries in processing of information during group decision-making. They are classified into three categories:

Negotiation Focus

A strict focus leads to a reduction of total amount of information exchanged and shortens the group discussion. The focus of each group member is on exchanging and negotiating

ideas and thoughts to identify the majority opinion. Finally that belief should be settled within the group (e.g. voting). Fresh information is not the goal and reduces the total amount of information exchanged during group decision. (ibid., p. 464f.)

Discussion Bias

Shared information is discussed proportionally more than unshared information and is more often repeated. Unshared information will be uncovered by the group when discussions are taking longer. Therefore a discussion focus of the group will rashly limit the detection of unshared information when agreement seeking or voting is predominant. (Larson et al., 1996; Savadori, Van Swol, & Snizek, 2001, cited in ibid., p. 464)

Evaluation Bias

Shared information/preference-consistent information is seen as more credible and more important than unshared information by each group member (Greitemeyer, Schulz-Hardt & Frey, 2003; Kerschreiter et al., 2006, cited in ibid., p. 465). Generally individual information is held more precious by each group member than information of other group members (Chernyshenko, Miner, Baumann & Snizek, 2003, cited in ibid., p. 465). Finally shared information enjoys social validation compared to unshared information which is regarded with more doubt (Parks & Cowlin, 1996, Postmes, Spears, & Cihangir, 2001, Wittenbaum, Hubbell, & Zuckerman, 1999, cited in ibid., p. 465)

In addition the group phenomenon group polarization limits the uncovering of unshared information. Group members have the tendency to support their initial decision preferences. As a result these opinions are more often repeated during group discussion and each group member holds back information that would be against one's position. Due to the fact that each member wants to convey competence and consistency, agents argue preference consistent information. (Wittenbaum, Hollingshead & Botero, 2004, cited in ibid., p. 465)

Each of the above mentioned asymmetries in information processing during decision-making may have harmful influences on group decision quality. Satisfactory group decision-making will benefit more from their superior information potential when the group manages to find tactics to solve these asymmetries in information processing.

(Brodbeck et al., 2007, p. 467ff.)

Information distribution and processing and its influence on decision quality

Group surplus (see green box in figure 1-11) will occur, if asymmetries in information distribution occur (e.g., hidden profile) and the processing of information is symmetric, where the group kills these asymmetries prior in information distribution with cooperative and positive discussion. Occasionally by pooling shared and unshared information superior decision alternative will be uncovered. (ibid., p. 462)

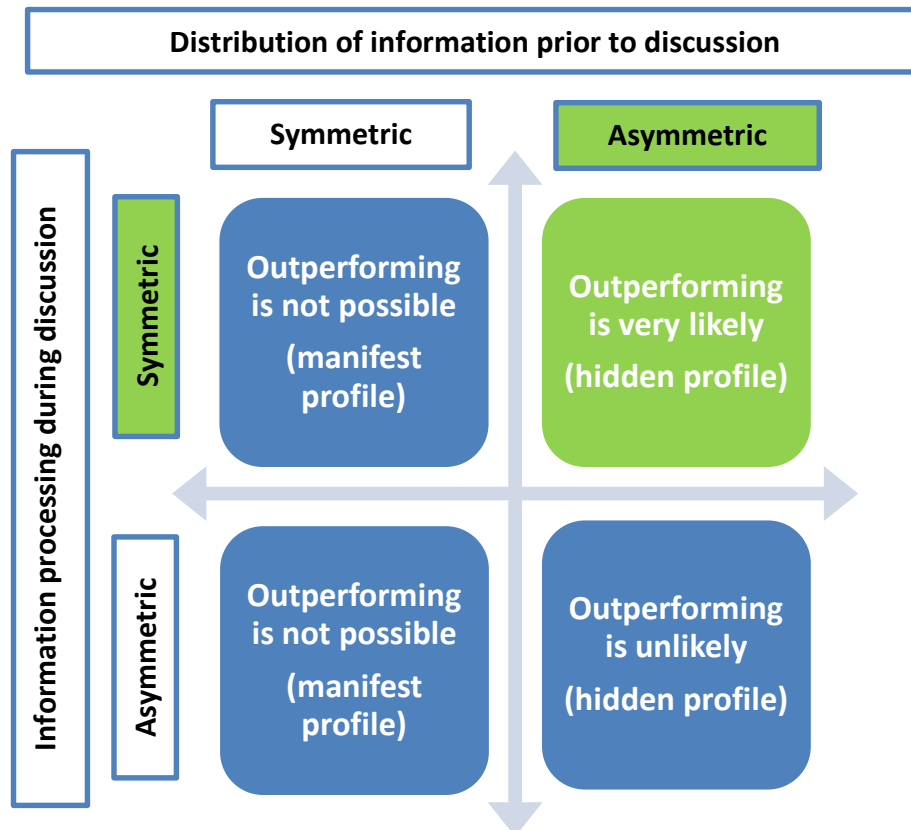


Figure 1-11: Beneficial Group Decision-making (modified from Brodbeck et al., 2007, p. 461)

Information process of decision group and influencing factors

The information process of the decision group varies with the following factors:

- personal interest
- predetermined group's decision rule
- violation of decision power parity

Personal Interest

On the one hand when one or all members follow their own objectives or interests during the decision-making process and not those determined by the manager, the agents tend to influence prior information search and its processing. Like some empirical studies show that personal interests of group members harm the willingness of exchanging and providing information for one another (Deutsch, 1968, cited in Laux, 1979, p. 155). On the other hand it is possible that conflicting interests motivate members of the group to exchange information and communicate intensively in order to persuade the other members of her/his alternative. Finally her/his alternative wins the voting procedure. (Böhm, 1970, cited in Laux, 1979, p. 155)

Predetermined group's decision rule and violation of decision power parity

When the voting procedure of the group is predetermined, then this specific choice may have an influence on the information behaviour of the group members; called “**information-behaviour effect**” by Köhler (1976, p. 13). For instance in cases, when the unanimity rule is the predetermined decision-making rule of the group, a respective amount of information will be collected and shared among group members. In this group procedure all members have to agree with the same alternative. This fact leads to a more intensive information gathering and exchanging between the group members than the single vote criteria. Finally when the decision power parity between group members is violated, then the member's motivation of participating in the decision process is decreased. (Laux, 1979, p. 328)

Conclusion Information Process

As aforementioned in the chapter “Information process” focus, discussion bias, evaluation bias and the group phenomenon group polarization has harmful effects on group decision quality when hidden profile circumstances occur. In this case unshared information is not distributed to all group members, but these facts are essential for choosing the best decision alternative (hidden profile). (Brodbeck, 2007, p. 464) One major objective of an organisation should be to find tactics/activities to stimulate information flow within the whole organisation and between specific group members.

c) Group decision scheme/Decision-making rule

There exist various strategies in the literature how final agreement as a group can be reached various. For this analysis the following two terms, “**group’s decision rule**”, “**group or social decision scheme**” were considered.

“Nearly every decision-making group must achieve some level of agreement or consensus among group members to define a group choice. This required degree of consensus is called the **group’s decision rule**.” E.g. majority rule criteria, unanimity rule. “Decision rules may be explicit and formal or implicit and informal. Decision rule is a very important aspect of decision-making procedure.” (Baron et al., 1992, p. 93)

“**Group decision scheme** is a rule or procedure that the group uses to formulate a group decision from a number of individual decisions” (Smoke & Zajonic, 1962, cited in Laughlin, 2011, p. 12).

Davis (1969, cited in Laughlin, 2011, p. 14) describes a **social decision scheme** (corresponds to Smoke and Zajonic group decision scheme), “that is a rule or procedure (constitution, bylaws of group, tradition etc.) by which the group combines a distribution of member preferences in a collective group response” e.g. Majority Vote: rule for committees etc.

Majority Vote

“Majority vote selects the alternative that more than half the group members think should be accepted” (Tjosvold & Field, 1983, p. 501).

Additionally the terms consensus and consensus with qualification are described in literature as the following.

Consensus

“In consensus decision making, all group members express their opinions, discuss the issue, and then choose an alternative they all can agree to, at least in part” (ibid., p. 499).

Consensus with Qualification

Another type of decision-making rule is “**consensus with qualification**”. Köhler (1992, p. 13) suggests if no consensus reached by group, superior instance should decide.

When deciding which decision-making rule should be applied to the group, Laux (1979, p. 390) argues, that procedure should be chosen that manages to aggregate individual preferences of alternatives the preferences of alternatives of the group as a whole.

As mentioned above the final choice of the group for a specific alternative depends on the chosen decision-making rule of the group; “**aggregation effect**” (Köhler, 1976, p. 13). Furthermore the information behaviour of each member is influenced by determination of the decision-making rule; “**information-behaviour-effect**”. (Kaus, 1977, cited in Laux, 1979) (Tjosvold & Field, 1983, p. 505)

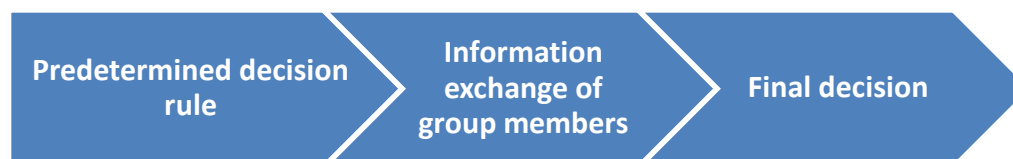


Figure 1-12: Information-Behaviour-Effect and Aggregation-Effect

In addition the decision task could trigger a specific procedure how the group has to solve a problem (Burnstein et al., 1983, p.550). Although a manager defines how a group reaches final agreement, the chosen procedure may vary. In some situations a manager prefers to use majority vote for group decision-making. For instance the majority vote rule reduces time needed and disagreement for group decision-making. In another context commitment to a decision is important or discussion should stimulate the learning progress of the group. As a result consensus decision-making is preferred. (Tjosvold & Field, 1983, p. 506) Figure 1-13 shows the interplay of decision task, influence of manager and decision-making rule.

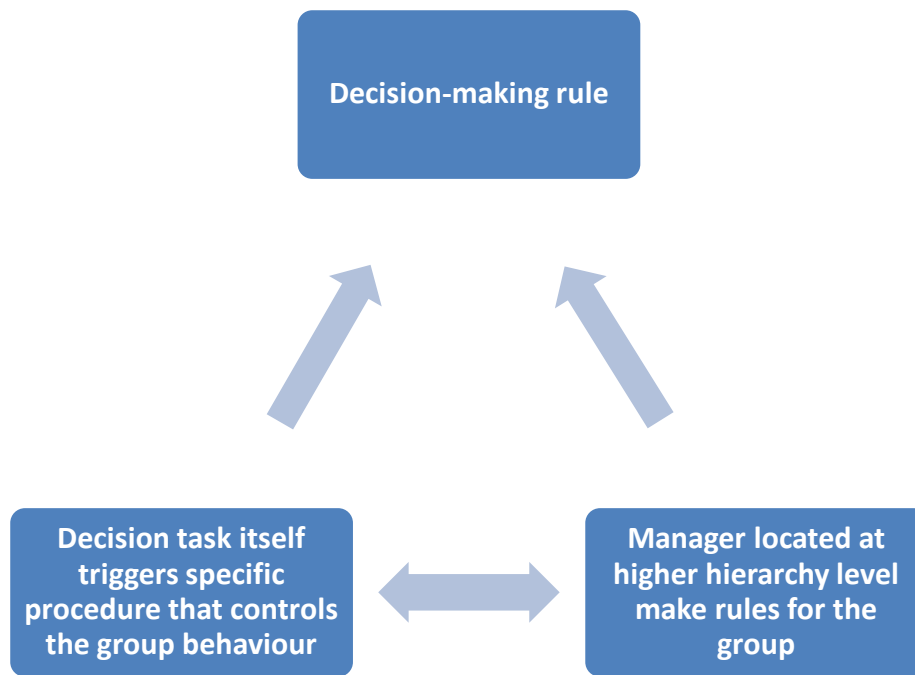


Figure 1-13: Choice of Decision-making Rule

1.3.3 OUTCOME variable

“The effectiveness of group decision-making is an increasingly vital concern for organisations. When important economic, technical, medical, or political issues are to be resolved, groups rather than individuals are employed to make high quality decisions” (Hollenbeck et al., 1995, Vroom & Jago, 1988, cited in Brodbeck et al, 2007, p. 459).

It is obvious that decision-making as a group is more costly compared to individual decision-making. The need of social interaction between several individuals and the time consuming exchange and discussion of information are some cost factors for the company. (Brodbeck et al., 2007, p. 459)

Besides these costs there are several other aspects of group decision-making one has to discover and justify (ibid., 2007, p. 459).

“Considerable research suggests that groups typically make decisions superior to those made by individuals (Kelley & Thibaut, 1968; Nichols & Day, 1982) and induce greater acceptance of the decision (Maier, 1970) and more understanding of the problem (Laughlin, 1978). But not all groups are effective. Janis's (1972) work on groupthink dramatically illustrates that members sometimes conform, stifle discussion, and make unreasonable decision” (Tjsovold & Field, 1983, p. 500).

As mentioned in the section 1.3.2, b) “information process” hidden profiles are a necessary condition for a group to make better decisions than individuals or outperform certain voting schemes (no discussion before voting to uncover hidden superior decisions alternatives). However several studies have illustrated that most decision-making groups are not able to identify the best informed decision alternative in hidden profile situations. (e.g. Brodbeck, Kerschreiter, Mojzisch, Frey, & Schulz-Hardt, 2002; Gruenfeld, Mannix, William, & Neale, 1996; Lam & Schaubroeck, 2000; Lavery et al., 1999; Stasser & Stewart, 1992; Stasser & Titus, 1985; Winkvist & Larson, 1998, cited in Brodbeck et al., 2007, p. 461)

Besides better decision quality there are many other aspects that are in favour of group decision-making.

- Organisational culture preferences (e.g. empowerment of group members) (ibid., p. 473)
- Identification and Integration of individual ideas, perspectives and opinions (ibid., p. 473)
- Group participation leads to higher acceptance and implementation of decision (ibid., p. 473)

- increasing perception of fairness leads to higher identification with decision and to stronger commitment to decisional consequence (Moscovici & Doise, 1994, Vroom & Jago, 1988, cited in Brodbeck, 2007, p. 459)
- Broader range of information and unique knowledge of the group (Clark & Stephenson, 1989; Hollenbeck et al., 1995; Maier, 1963, cited in *ibid.*, p. 459)

If one subsumes all these positive effects of group decision-making, “groups make high-quality decisions and foster creativity and innovation” (Stasser & Birchmeier, 2003, cited in *ibid.*, p. 459).

Moreover it is widely accepted by many organisations that decisions made by groups of individuals with diverse knowledge and expertise lead to higher decision quality in comparison to decisions made by a members with homogenous backgrounds or by single manager. (Jackson, cited in Brodbeck, 2007, p. 260)

Nevertheless there are several research studies that state that groups are not able to exploit the full informational potential (Hinsz, Tindale & Vollrath, 1997, and Kerr & Tindale, 2004, cited in *ibid.*, p. 260). The fact that in organisations groups of individuals learn from each other’s unique knowledge through interaction in order to make high quality decisions, is hindered by the inability to communicate information efficiently across group members (*ibid.*, p. 260).

“Our current dependence on groups to make important decisions is, unfortunately, not a cause for optimism. Humorous saying like, “A camel is a horse designed by a committee,” or “A committee is group that keeps minutes and wastes hours,” attest to the fact that groups often do not perform as they should. Indeed, some of our government’s most foolhardy and embarrassing foreign policy decisions were made by presumably well-informed and well-intentioned groups.” (Janis, 1982, cited in Hirokawa, 1996, p. 269)

Results of several studies show that the performance of decision-making groups is, in most cases, depending on factors that group members are able to regulate and control (Collins, Steiner 1972 and other studies, cited in *ibid.*, p. 270). According to Hirokawa (1996, p. 270) following factors influence the final group decision:

- informational resources
- quality of effort group members put forth
- quality of thinking (make conclusion as a group)

- decision logic its members employ in reaching a decision (Senge, 1990, cited in *ibid.*, p. 60):
 - rational issues (carefully considering positive and negative attributes of each solution and select alternative with most positive attributes)
 - political issues(building one's own power base, self-interested, looking good, pleasing the boss)

A crucial capability of an organisation is to design decision procedures in the way that these factors mentioned above are controlled in the best interest of the desired final output. For instance choosing right leading managers that guide group members in the right way, assessing the right decision criteria etc.

In order to get high quality group decisions in an organisation, one has to know *how* groups function and interact successfully. As was showed in the section 1.3.1, d) “Effectiveness of Teams”, “*psychological safety*” modelled by the group leader leads to effective group interaction. Moreover “Katzenbeck and Smith (1993, cited in Boddy, 2008, p. 561) observed that members of a team who surmount problems together build trust and confidence in each other. They benefit from the buzz of being in a team, and of ‘being part of something bigger than myself’.”, hence resulting in beneficial group decisions.

2 Methods

2.2 Case Studies

Given the incomplete previous research on how group decision-making is performed in organisations, this study tries to shed light on this complex topic by several investigational steps.

The exploratory research design was primarily case-oriented and supplemented by relevant literature. Due to the inductive approach of research relevant case studies were filtered concerning different aspects of group decision-making in organisations. Data were then analysed and explored in order to get an idea of how group decisions in organisations are structured and function. Thereby Laughlin's (2011) four basic constructs regarding joint problem solving were used. To sharpen the insights yielded by the inductive procedure relevant literature was screened. Desk research and case study approach were carried out simultaneously.

2.2.1 Selection and Analysis of Case Studies

A comprehensive search process in five peer-reviewed journals (Strategic Management Journal 1980-2013, Organisation Science 1990-2013 and Academy Management Journal 1958 till present and Academy Management Review 1976 till present) was performed. Following search terms were used "decision rule", "decision maker", "decision-making process", "decision process", "committee", "decision power", "collaborative decision-making", "decision steps", "multi-level decision", "decision problem", "group decision", "majority vote", "majority rule", "middle manager", "resource allocation decision", "board decision", "blocking decision", "veto right", "executive team recruitment process", "team organization", "negotiation process", "collective decision-making", "decision-making steps", "decision-making group", "decision-making team", "decision authority", "unanimity rule", "team decision", "team problem", "majority influence", "minority influence". In addition context specific keywords were used such as "portfolio-planning", "investment decision", "resource allocation", "acquisition", "merger", "new product", "market entry", "disinvestment", "participative budgeting", "budgeting process".

This keyword search procedure resulted in 1,316 articles from which the most important abstracts were taken in consideration for further assortment of analysis. Simulation models, experiments, and not relevant regression analysis were excluded from 1,316 studies. Besides articles with relevant theoretical background concerning group

decisions only case studies dealing at least partly with group decisions were selected. In this context the identification of the used methods in the studies helped with the selection and led to 95 case studies dealing with facts about group decisions. This sample was fully screened and the content scrutinized. The search and screening process lasted for three months and lead to a final sample of 79 case studies that are included in this analysis. Two articles from Eisenhardt published in Management Science 1988 and Academy of Management 1989 are also part of the analysed sample. Randomized combinations of the keywords lead to the same search hits.

These case studies were examined by means of important determinants and relevant aspects of group decisions based on literature reviews (e.g. Laughlin, 2011). The research objective was to obtain as much data as possible about the following parameters of group decision-making.

- Decision Task
- Group Composition (number, power structure, etc.)
- Decision Process & Information flow (search & exchange activities)
- Final decision-making

For some parameters (decision type, considerations of alternatives and number of team member) quantitative analysis (frequencies) were carried out.

The study aimed at creating an overview of the whole group decision process; from information filtration to final agreement in the group.

The Academy Management Review was not used as because this journal publishes only meta-theories concerning decisions in firms and no relevant case reports could be found in this database.

2.2.2 Implications for Next Research Step

So far little effort has been devoted to group decision-making process in real businesses. Previous research has concentrated only on certain parts of group decision-making such as group cohesiveness, performance issues of group decision-making, etc. Most prior research has failed to investigate all relevant parameters of group decision-making at once. Consequently these results were taken out of context. Information about the whole process and its participants is very fragmented. There exist hardly any case studies that described group-decision making from its initial start to the final solution. In particular facts about how the group interact and how they come

to the final decision are missing. Additionally little attention has been paid to the information flow during and before final decision-making. Only a few studies have looked at the motivation for group decision-making and how it is integrated in company's existing processes.

Nevertheless case studies verify that group decision-making is part of organisational life and is often used for strategic decision-making. The following empirical examination tries to produce a more comprehensive understanding of group decision-making in firms. Against this background and the insights gained by the preceding literature search were relevant for the further investigation of this topic.

2.2.3 Framework of Group Decision-making Process

Based on gained insights of desk research and case study analysis groundwork for semi-structured interviews was derived and a questionnaire was developed. Thereby several aspects, constructs, models of group decision-making and facts of case studies were collected and subsumed to develop the framework for next exploration phase which is illustrated in the subsequent figure (figure 2-14). It gives an overview of the group decision process in an organisation and its important parameters. It summarizes the theory background previously discussed embedded in time horizon of group decision-making.

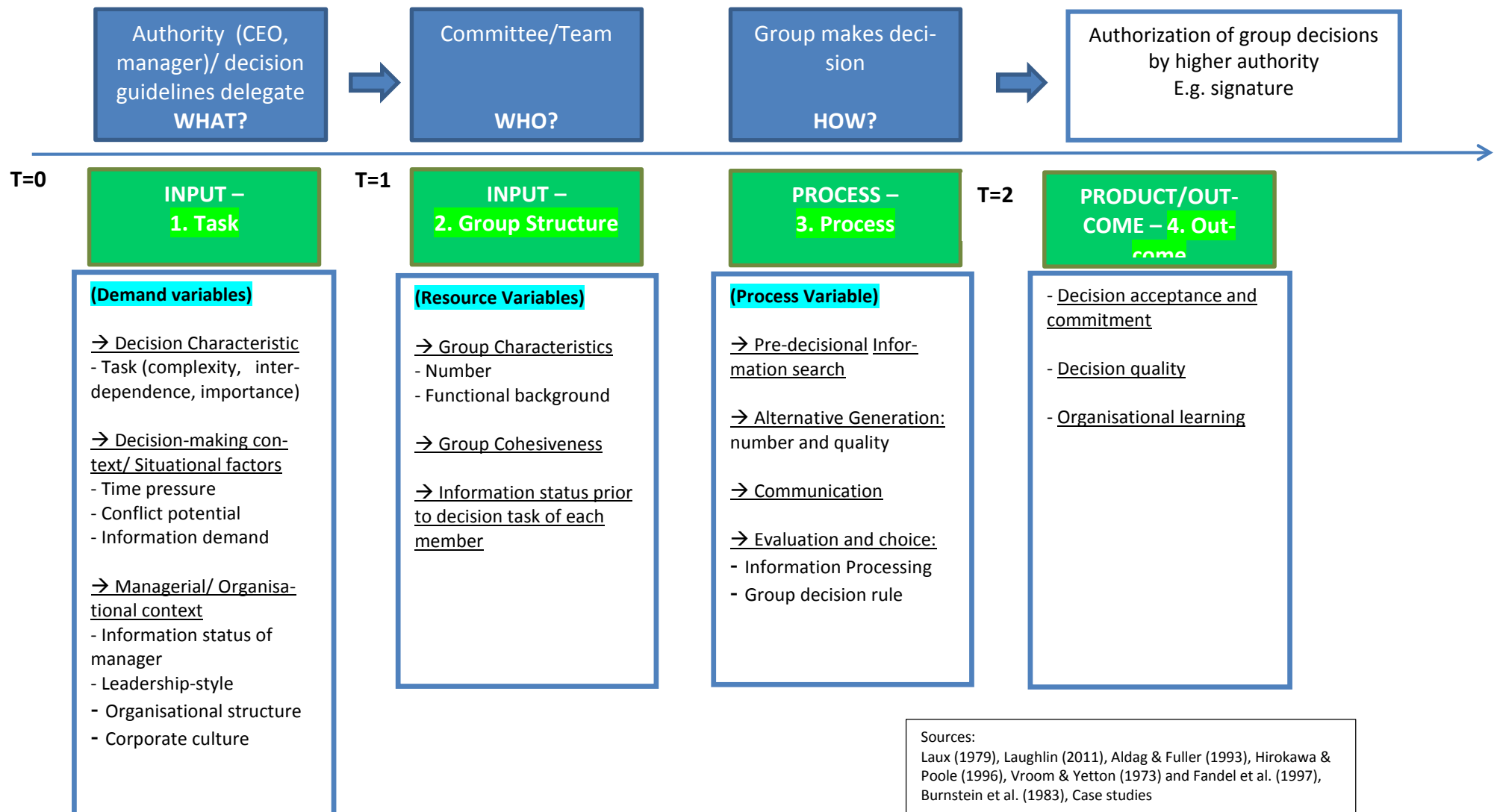


Figure 2-14: Decision-making process in an organisation

2.3 Semi-structured Interviews

2.3.1 Aim of Interviews

As the case studies verify that group decision-making is part of organisational life a deeper insight in the whole process and its facets is targeted. Against this background the aim of the interviews was to get as much related information of the current practice of group decision-making in organisations from the interviewee having the three major variables, its sub items and its final outcome in mind:

1. INPUT – Demand Variable (Decision task)
2. INPUT – Resource Variable (Group structure)
3. PROCESS (Information, Communication, Decision rule)
4. And finally about the OUTCOME (Causes/motives for group decision-making), that is the result of the interplay of 1) - 3).

These variables are the base for the questionnaire that is presented in detail below. The demand variable decision-making context (situational factors) is not an object of investigation when collecting data about the group decision-making.

2.3.2 Questionnaire/Survey

Data are collected using a semi-structured questionnaire. In order to get an overview how group decision-making is carried out in practice my inquiry form should cover the following questions:

- How do the input factors look like in real organisations? (decision, group type, amount of group members etc.)
- How is the decision process performed by management teams, committees etc.? (information exchange, final decision-making)
- What are the motives for group decisions in real organisations? When and why are they preferred by managers?

Hence my survey is designed to elicit the following information:

- reasons for group decision-making
- decision groups and its team members
- decision-making process
- information
- final decision-making procedure
- communication

The questionnaire includes the following sections with its respective questions.

Reason

In the course of the interviews the causes for group decision-making in organisations is explored, because it is relevant for getting a complete understanding of the phenomenon group decision-making in firms. Thus one of the purposes is to find out what circumstance or necessity in an organisation is a motivation for manager making decisions as a group rather than alone. Thus one central question is: why is group decision-making executed by managers in firms and why not?

It is crucial to know why group decision-making is important in an organisational context. The question is: Are group decisions predefined by organisational policy or are managers by themselves motivated to use a group for the final solution and why they are doing so.

Team Members

Next the group or team responsible for the decision is in the centre of a group decision-making process. Therefore information about the participants in this process is collected, in particular their role and activity in the organisation and in a certain decision process. Furthermore I am interested in the amount of group members making the final decision.

Decision Process

As case study analysis revealed, especially the process variable is still a black box. Only scarce data exist about the whole group decision process from its initiation until final decision-making by the group. For instance how meetings look like and how many are necessary for final decision-making; how many alternatives are regarded by the decision group; who authorizes group decision and how group decision-making is embedded in certain decision processes.

Information

Another major part of the interviews are the information activities and procedures of group members during group decision-making. The questionnaire should give answers to the following questions: How do agents get necessary information about regarded decision task? Who knows what and how is information exchanged during group decision-making?

Final Decision-making

How the group comes to a final solution is another investigational focus. Data are collected about how the distribution of decision-making power among group member looks like and which members of the group have the authority to decide. Case studies did not give any data about decision power when making final group decision. In addition informants should indicate whether and which decision-making rule is chosen and used by the decision-making groups.

Communication and Personal Interest

In this section information about the communication behaviour and climate between group members should shed light on the occurrence of personal interests of its participants.

2.3.3 Interview Sample

a) Criteria of Sample

The randomised sample was restricted to big firms in Austria which were identified with the help of the ORBIS data base. Most ATX companies and other big Austrian cooperations are located Vienna. Thus I selected organisations located in Vienna for my final sample (+convenience reason). In addition only “very large”, “large” and companies with minimum of 100 employees, were predefined criterions and put into the ORBIS data base. Finally as stated below 618 organisations were listed by ORBIS data base.

In a next step firms were contacted via email including all relevant information regarding the enquiry, whereas the first contact persons were identified via ORBIS data base or corresponding company website. In addition, it was requested to distribute the letter of enquiry to other areas in the company as well.

For instance the request was passed through a contact person of human resource department to another part of the company. Finally appropriate interview partners were introduced by cooperative employees of the organisation.

	A	B	C	D	E
1	Product name	Orbis			
2	Release Nummer	122			
3	Software Version	128.00			
4	Daten Update	10/04/2014 (n° 12206)			
5	Username	Wirtschaftsuniversität W-19614			
6	Export Datum	11/04/2014			
7			Schrittergebnis	Suchergebnis	
8	1. Alle aktiven Unternehmen und Unternehmen mit unbekannter Situation		104,931,861	104,931,861	
9	2. Weltregion/Land/Region in Land: Österreich		792,929	761,961	
10	3. Unternehmenskategorien: Sehr große Unternehmen, Große Unternehmen		1,693,156	10,539	
11	4. Anzahl der Mitarbeiter: Letztes verfügbares Jahr, min=100		747,647	2,436	
12	5. Stadt: 1090 VIENNA, 1090 WIEN, 1130 WIEN, 1140 WIEN, VIENNA, VIENNA - AUSTRIA, VIENNA 1, WIEN, WIEN (AT), WIEN - LIESING, WIEN A, WIEN AT, WIEN POSTFACH, WIEN, ETAGE 23, WIEN, AM GETREIDEMARKT 1, WIEN, EKAZENT SIMMERING, WIEN, FAVORITEN, WIEN, GROßFELDZENTRUM, WIEN, GRUPPE A, PARZ. 20, WIEN, LANDSTR, WIEN, LANDSTRASSE, WIEN, MARIAHILFER STRASSE, WIEN, SIMMERING, WIEN,PEFEKTASTR.86-, WIEN-DONAUSTADT, WIEN- LIESING, WIEN-ALT ERLAA, WIEN-ATZGERSDORF, WIEN-RODAUN		73,908	0	
13	6. Stadt: VIENNA, WIEN, WIEN (AT), WIEN A, WIEN AT		73,861	0	
14	7. Weltregion/Land/Region in Land: Wien		193,281	618	
15	Bool'sche Suche : 1 Und 2 Und 3 Und 4 Und 7				
16			Gesamt	618	
17	Current search settings: - Die aktuellsten verfügbaren Abschlüsse werden bevorzugt - Unternehmen ohne aktuelle Finanzdaten und öffentliche Behörden/Staaten/Regierungen werden nicht berücksichtigt				
18					
19					
20					
21					
22					
23					

Figure 2-15: Sample

b) Final Sample

The final sample consisted of twenty five organisations from the following industries (Statistical Classification of Economic Activities in the European Community, NACE) shown in the subsequent diagram (figure 2-16). The organisations of my sample have different organisational structures (GmbH, AG, Konzern), most of them are part of big corporations.

For the interviews it was tried to get in touch with employees of middle to top management level. In these hierarchy layers complex decisions have to be solved. For almost half of the sample it was possible to contact informants located in this targeted position. I had the opportunity to talk with three directors of firms and three agents that are in very close contact with highest management level. Moreover several heads of divisions and other managers were interviewed.

Heads of divisions are making decisions as a group and are participating in executive boards. As a result they were able to give insight in different groups that use

joint problem solving. Low-level managers are more involved in operational daily-life than in real decision-making. From time to time they are taking part in higher management teams, but there their decision power is limited. Their primary input is information and analysis limited to smaller areas of interest. Nevertheless they know the decision processes and are participants in some important group decisions.

The classification of my informants encompasses “low”, “middle” and “top-level management level”. Figure 2-17 summarizes the type of managers in the regarded hierarchy level.

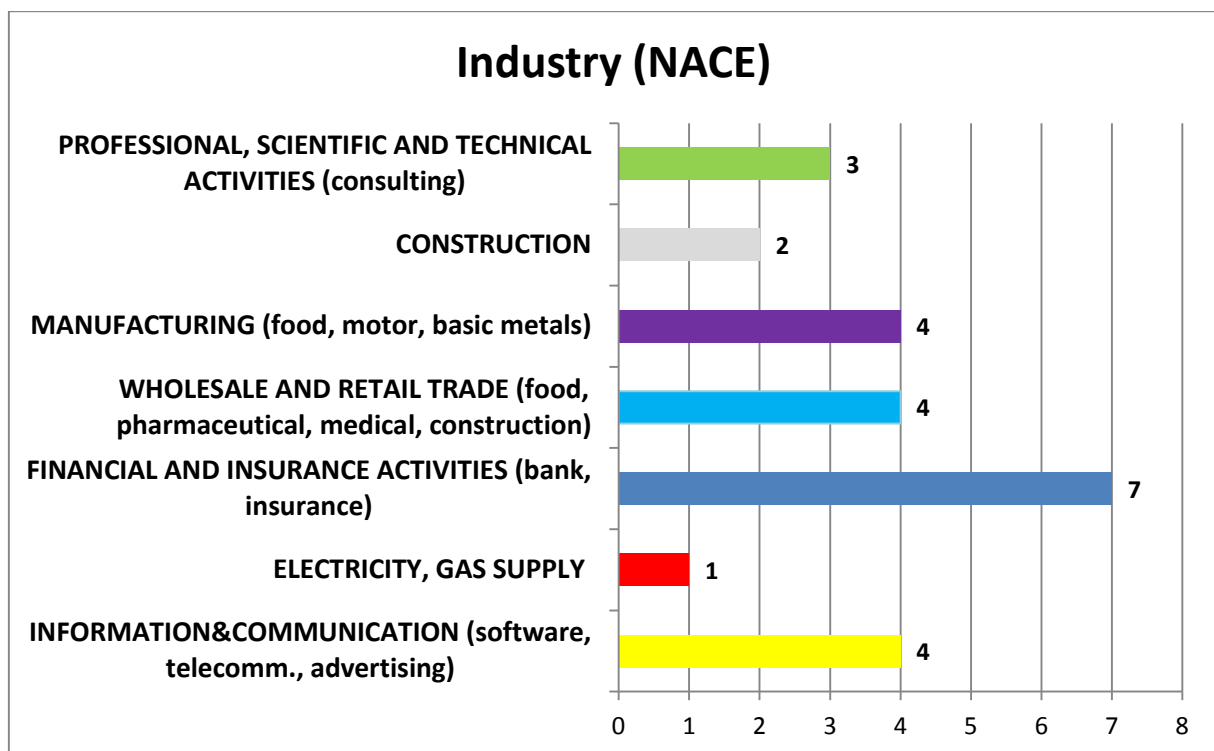


Figure 2-16: Industry

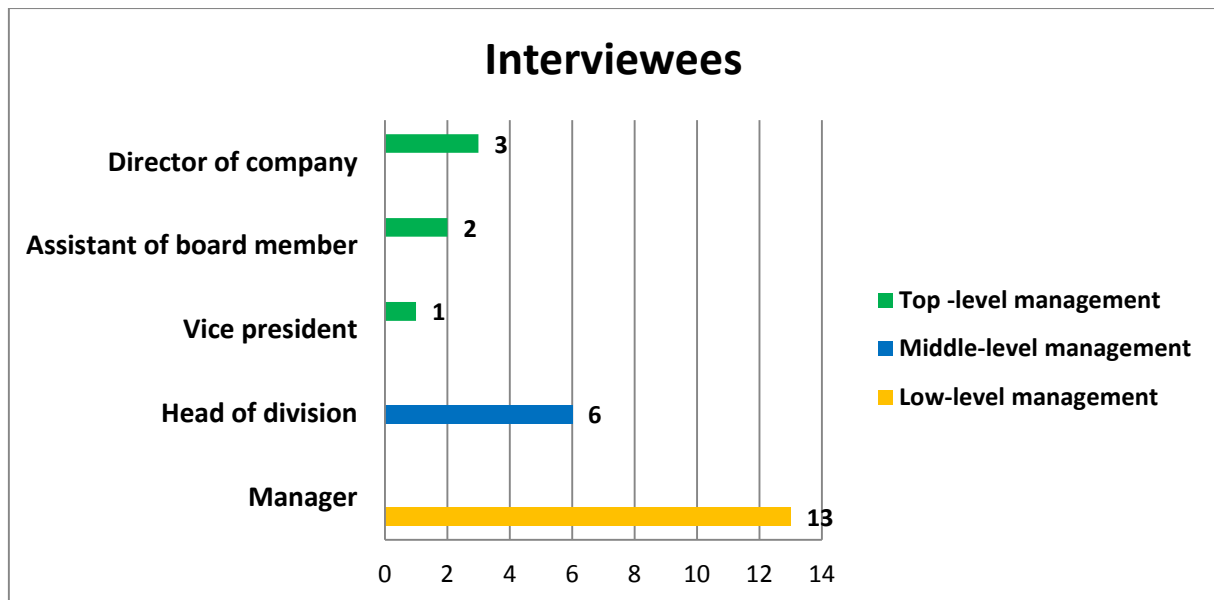


Figure 2-17: Interviewees

2.3.4 Data Collection

This step was concerned with conducting and transcribing twenty five semi-structured interviews with agents of firms at various levels including directors of firms or individuals that are in close contact with highest management layer, head of divisions and other managers.

Prior to the interview the purpose of the research was explained and a short description of group decision-making was given. All interviews gave permission to tape-record and transcribe the conversation and protection of anonymity of the organisation and the interviewee was granted. All interviews were conducted in German language. The interview started by asking the informants about the interviewee's responsibility, role and activity in the organisation. In addition they were asked to give a short overview of organisational structure and when group decision-making is part of the decision process. Each manager was then encouraged to identify decisions that were solved by groups and to report as much information as possible linked to the interview sections (team members, decision process, final decision-making, communication, personal interests, reason). The interview guideline consisted of open-ended questions that enabled the respondent to link and trace his or her mentioned group decision tasks, in doing so it was focused on facts and events rather than on attitudes and interpretations. This interview guide was enhanced with questions that appeared interesting during conversation following the inductive research approach. Although the

conversations were fully tape-recorded also hand-written notes were taken. The interviews were normally 30-60 minutes in length and were undertaken over a period of six months. Most of the interviews were carried out face to face, whereas two were conducted via telephone and one interview was done via skype.

Some interviewees showed some internal documents about organisational structure or decision-making process. For security reasons these documents were not allowed to be taken out of the organisation. Company websites were used as additional source of information, where data about executive team members or about organisational structure were available.

2.3.5 Data Analysis

The interviews were analysed using qualitative content analysis according to Mayring (2000). It is a technique for systematic text analysis. Within this procedure most of the categories were built based on theoretical considerations and the examination of the case studies (deductive category application). The aim of the study was to collect data regarding the main and sub categories decision task, reason, decision process, information and final decision. Quantitative analysis (frequencies) was conducted for the following sections.

- Decision Task
- Teams
- Meetings
- Alternatives
- Final decision-making
- Reasons for and against group decision-making

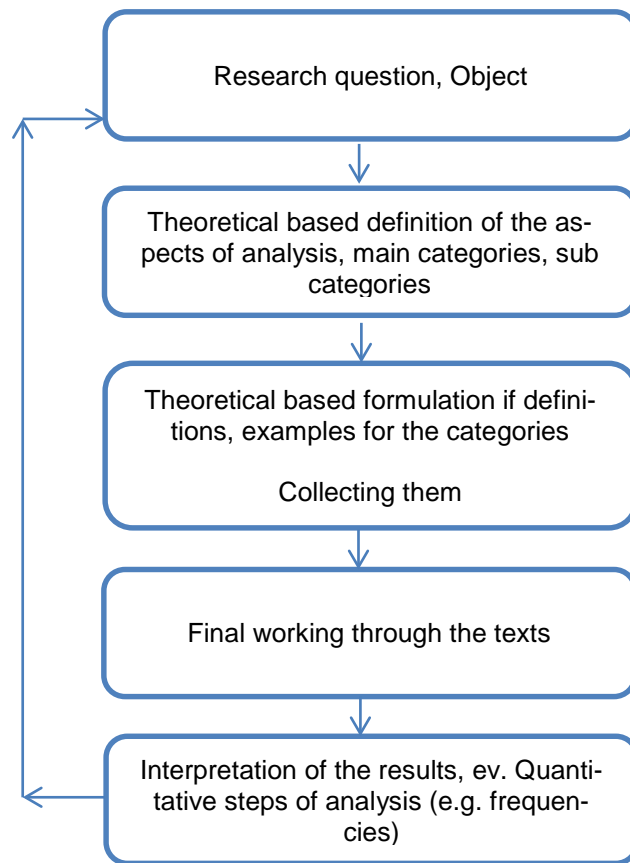


Figure 2-18: Step model of deductive category application (modified from Mayring, 2000)

Table 2-3: Content Analysis

Kategorie	Interviewte 1 Paraphrasen	Fundstelle	Generalisierung	Reduktion
Final decision-making	Eine Diskussionskultur zwischen diesen drei Personen. Die sich durchaus emotional auch laut, mit gegenseitigen Meinungen kommt, aber sie haben eigentlich die, nachdem sie auch schon so lange zusammenarbeiten, die kennen sich seit 17 Jahren, finden sie sich dann eigentlich schon immer im Kompromiss. Also es gibt jetzt keinen von den dreien, ich bin eigentlich die Nummer eins und ich entscheide für uns alle. Sondern es ist eigentlich schon immer eine Konsensentscheidung da.	I15, Z44-48	3 Geschäftsführer gemeinsam (bereichsübergreifende Entscheidung) emotionale Diskussionskultur, gegensätzliche Meinungen finden immer einen Kompromiss, Konsensentscheidung	<u>Geschäftsführer gemeinsam, Finale Entscheidung: Konsensus bereichsübergreifende Entscheidung</u> - 3 Geschäftsführer - emotionale Diskussion - Kompromiss bemüht; Konsensfindung - Machtverteilung hängt von Thema ab und von Position im Unternehmen (Hierarchie), Ressortaufteilung; wobei die 2 Gf die auch Vorstand in Konzern sind die Entscheidung eigentlich treffen - betrifft nur einen Bereich: Einzelentscheidung des jeweiligen Gf - bereichsübergreifende Entscheidung im Konsens
	Von den dreien, sind die zwei die auch Vorstände sind, natürlich, ich sage mal der dritte Geschäftsführer ist der Schwächste unter Führungszeichen. Weil er halt nur unter Führungszeichen Geschäftsführer in Österreich ist und die anderen beiden sind Geschäftsführer als auch Vorstände für den Gesamtkonzern. Das merkt man schon. In Wahrheit entscheiden von den dreien sind diese zwei, die auch Vorstände sind, die einfach von der Position her die Stärkeren unter Führungszeichen, weil sie ja natürlich eine andere Position noch haben. Außer es betrifft den Bereich des dritten Geschäftsführer für den er verantwortlich ist. Da hat er die Verantwortung und seine Ziele für den Bereich und da kann er natürlich auch alleine entscheiden.	I15, Z50-57	Entscheidungsmacht der zwei Gf die auch Vorstand im Konzern sind haben mehr Macht; da von der Position her die Stärkeren sind wenn nur Ressort betrifft alleine entscheiden Gf	
	Ja, es ist nicht so, dass einer dann vorprescht und Entscheidungen trifft, die dem anderen sozusagen nicht passen. Die beiden die Geschäftsführer und Vorstand sind, sind Gott sei Dank sehr ähnlich denkende Menschen auch von der Persönlichkeitsstruktur sehr ähnlich, das heißt sie verstehen sich was der andere meint und verstehen was die Idee dahinter ist und wie Entscheidungen dann im Konsens getroffen werden.	I15, Z59-63	Entscheidung im Konsens	

3 Results

During the interviews it was tried to keep the focus on decision examples and its various group decision processes from its start to the final decision-making as a group. Some informants were not able to describe the whole process in detail and were not capable to refer all its required steps until the final solution. Despite the fact that some data are missing, the information gathered are sufficient to get a reasonable overview about the most relevant parameters of group decision-making.

So still, many items of group decision-making remain a black box. Nevertheless in course of face-to-face interviews some interesting facts were mentioned. During the analysis various new aspects and even surprising aspects regarding group decision-making were uncovered.

3.1 Results of Case Studies

3.1.1 Industry

Figure 3.1-19 shows the types of industry, in which group decisions were made. In the field of electronics & high technology twenty one decisions and eighteen in IT were undertaken by groups. This is followed by health care industry with ten decisions- Each six group decisions were made in banking and finance and energy. For telecommunications five decisions were solved by groups. Other industries, e.g. household goods or pharmaceuticals had four or less reported group decisions.

The question arises whether group decision-making is more likely in industries (IT, electronics, High Technology) that are characterized by an environment of rapid change and that are dealing with complex products.

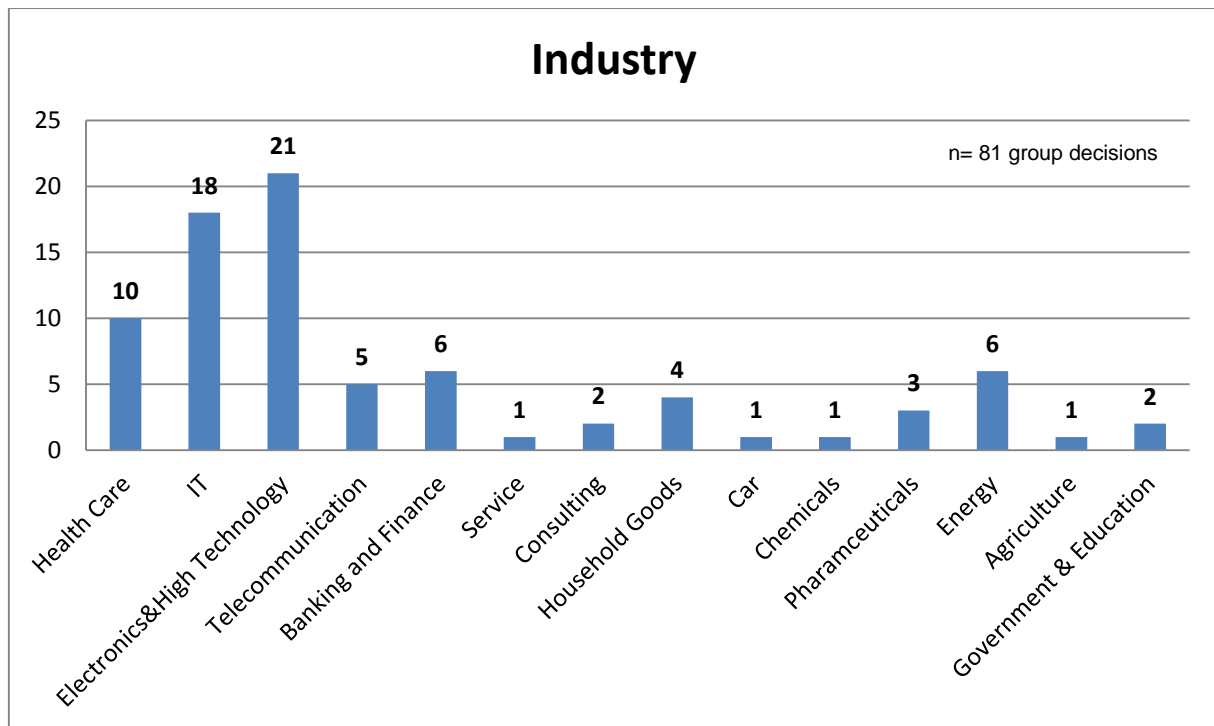


Figure 3.1-19: Scrutinized Decisions per Type of Industry

3.1.2 Decision Type

Figure 3.1-20 illustrates for which issues group decisions were carried out within the examined organizations. It shows that eighteen of the mentioned decisions were concerned with firm's policies and deciding whether to invest in a project or not was the topic of the same amount. Strategy decisions were mentioned sixteen times in case studies. For some cases it was clearly stated that the strategy for overall organisation was decided; others were just speaking of strategical decisions. Thus the number of decision type strategy has to be handled with care. Fourteen decisions were made in resource allocation, thirteen concerning restructuring and M&A questions and twelve were concerned with developing a new product. Human resource and general problems were with four and five respectively less.

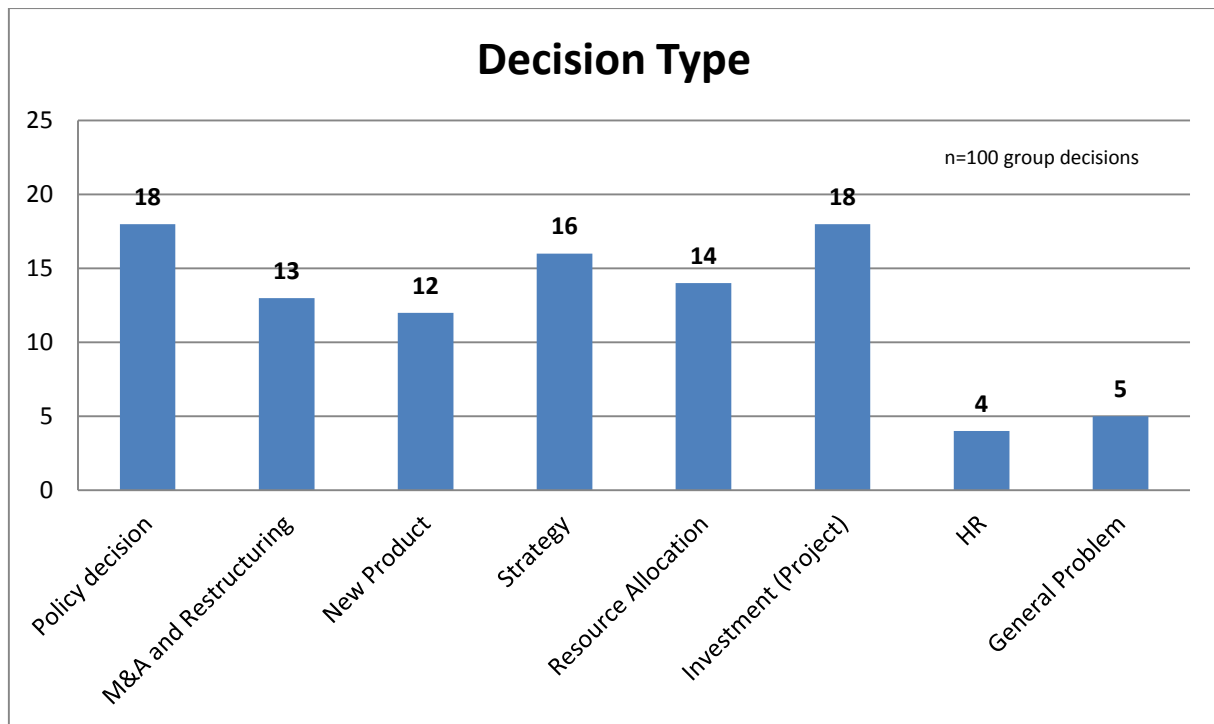


Figure 3.1-20: Decision Type

3.1.3 Considerations of Alternatives

The following chart shows in how many cases decision-makers could choose between how many decision options. Every bar is representing the count of decision options per reported decision. Most decision alternatives were reported for a HR decision, in which members had to elect two out of twenty one candidates. Ten options were named for deciding for or against a certain investment project. All other group decisions accounted for less than ten alternatives. Especially when deciding for a new product just a few options were regarded by the group for a possible solution. The median is two point five alternatives.

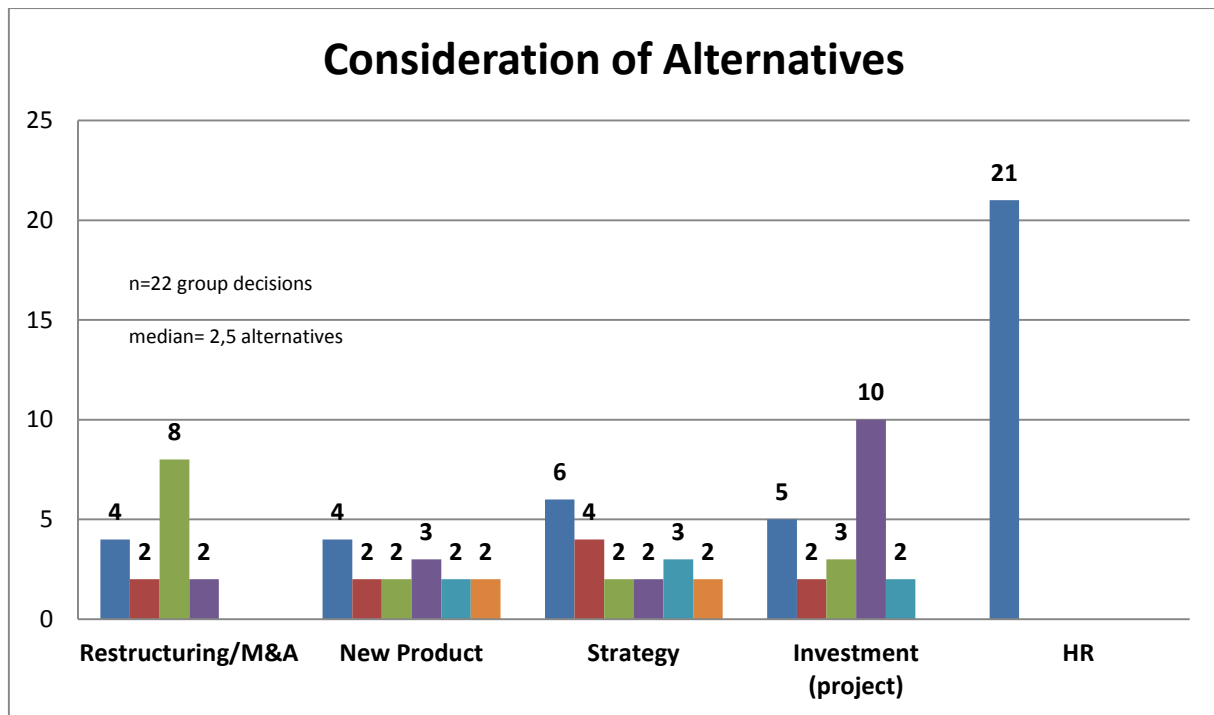


Figure 3.1-21: Consideration of Alternatives

3.1.4 Team Members

Only for some teams and respective decisions, the concrete number of decision-makers was reported. Most case studies did not depict the number of team members and its concrete composition of its team. In addition it was not clearly stated whether each group member has decisional power and/or take part in final decision-making or were participating for another purpose e.g. delivering information inputs. (McCartt, 1995)

The figure 3.1-22 illustrates which type of team made the decision and how many people were involved in decision-making.

Management teams were made up of employees throughout the company. For instance its team members belong to a specific department such as marketing, R&D or IT department or were a mixture of different managers from various areas of the organisation. Other types of groups were self-explanatory or its names were adopted from case studies.

The median is six group members. Top Management teams, executive boards and review boards consisted of three to maximum eight managers. For other decision-making entities such as different management teams, committees and trust boards four to fifteen group members were reported. Thus there is a slight tendency that executive teams that are located in top management hierarchy consist of less members compared to other management teams from lower hierarchy levels.

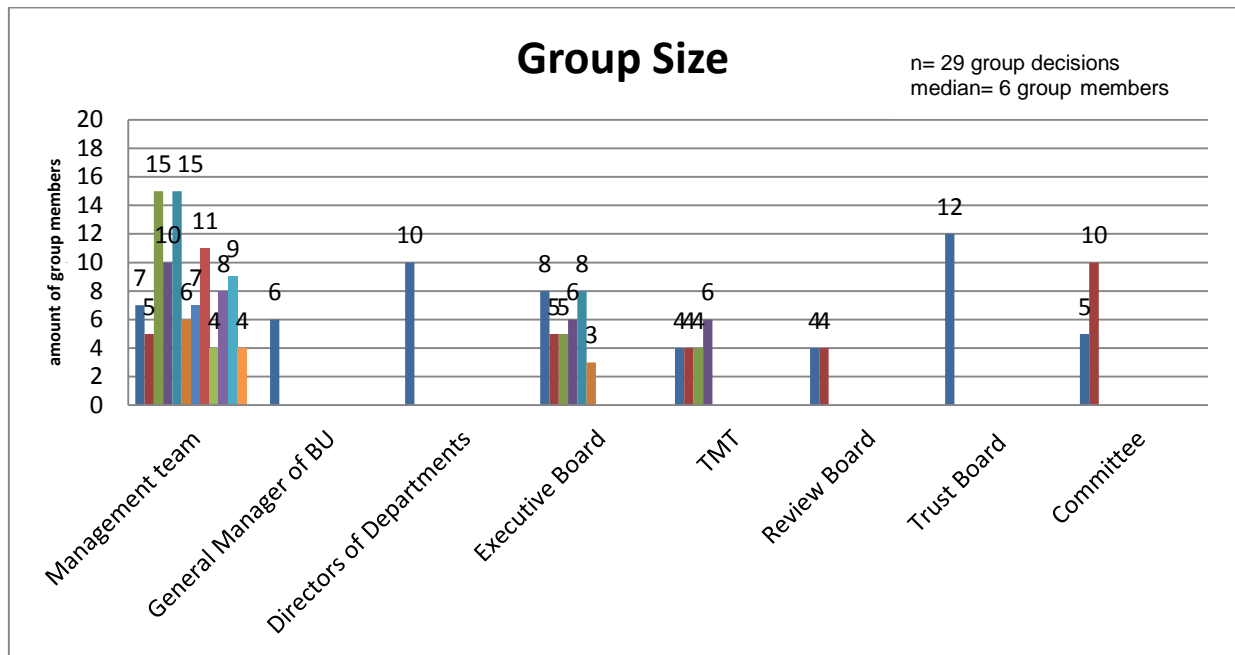


Figure 3.1-22: Group Size

Figure 3.1-23 depicts how many group members were solving certain decision tasks. Especially for Investment Projects and Resource Allocation less group members are involved in decision making. Its range is between four to seven group members. Followed by Restructuring and M&A issues where five to eight decision-makers are involved. Regarding new product development, strategy, policy decisions and solving general problems more agents are participating in decision-making. Its range is three to fifteen.

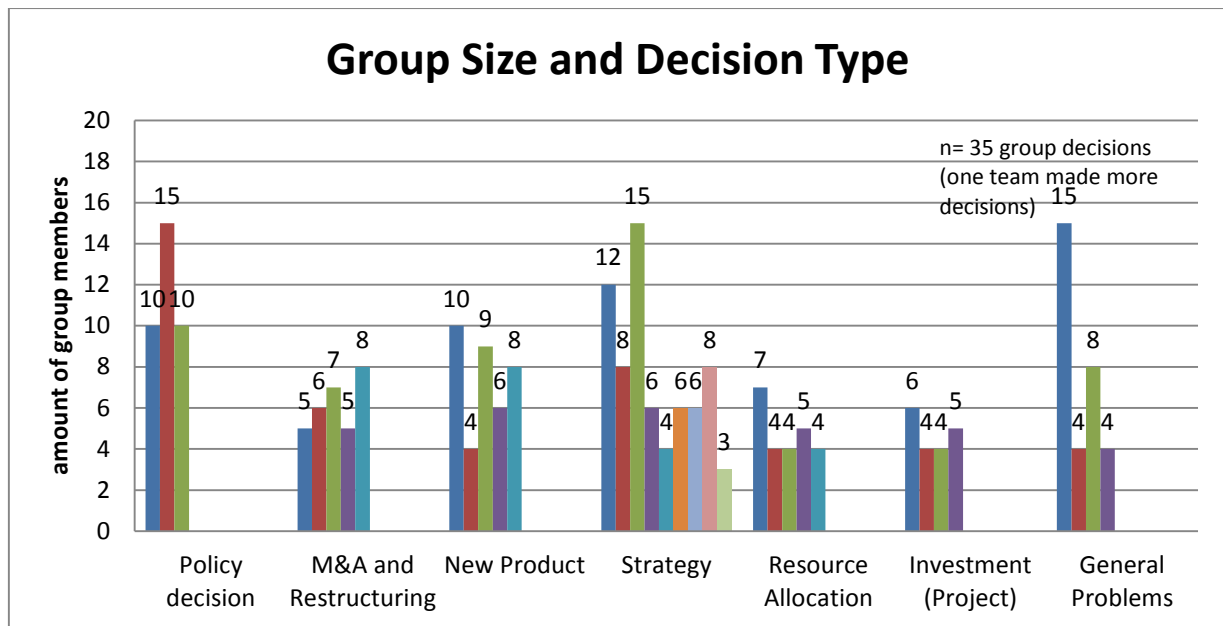


Figure 3.1-23: Group Size and Decision Type

3.1.5 Decision-Making & Decision Power

This procedure of final decision-making was very fragmentally mentioned in the articles. In team decisions by consensus with considerably ex ante discussion were revealed by some case studies (Martin 2010, Greiner, 1989, Barker, 1993, Sutton, 1996, Gladstein, 1984, Dean & Sharfman, 1996), but comprehensive information about this process is missing. In addition “consensus with qualification” (Eisenhardt, Bourgeois III, 1988 & Eisenhardt, 1989) represented another decision-making pattern. Some case studies revealed that voting schemes were used by different groups. For governmental issues a certain committee used a ballot as voting procedure (Mezias, Scarseletta, 1994) Additionally in an agriculture company elections with unequal voting power was carried out; voting power was linked to amount of production volume) were carried out (Gragiulo, 1993). In the study of Orlikowski and Yates (1994) a certain group of an IT firm made team decisions by consensus and for two very important decisions about project issues majority vote by a ballot was carried.

Regarding distribution of decision power among group members the following tactics were observed. In the study of Shaffer and Hillman (2000) an investigated energy organisation promotes coordination on major issues by forming committees with representatives from all major business units following “shared authority”. Heads of business units that contribute to a higher extent to firm performance have more decision-making power than other heads of business units for different decision tasks. For

instance they have a bigger influence during policy decision-making for the organisation and their more successful business unit are respectively considered during resource allocation decisions. In an agro-industrial firm the growers association voting power is proportional to the member total production volume, whereas “members of board of directors are periodically chosen in secret elections in which each member of the cooperative may cast a single vote, regardless of his or her share of the total production” (Gargiulo, 1993). Moreover expertise and know-how are factors for more or less decision power. According to a study of Sutton (1996) a design team developing new products give group members that are seen as brilliant and clever by other participants more decision-making authority. In a microelectronic firm a top management team made decisions on the force of argument (Burgelman, 1996) In addition meritocratic decision-making process was prevalent, only the ideas that achieved from other participants survived (O’Mahoney, 2008).

3.1.6 Decision-making Process

The description of activities of group members during whole group decision process (from information search and analysis until final decision-making) remains a black box and it was not possible to extract any patterns of group interaction process from case studies.

However the following tendency for the decision structure across hierarchy levels was mentioned to some extent in case studies. Executive teams at high hierarchy levels make policy decisions, give final approvals for certain decisions (product development, market expansion, capital investment, etc.) and establish strategic criteria & guidelines for lower management teams and manager in decision-making. (Sutcliffe, 2001, Bingham, 2011, Eisenhardt, 1989, Thomas, 1982, Taracki, 2013, Malnight, 1995, Kaplan, 2008, Orlikowski, 1994, Grant, 2003). The subsequent figure illustrates this process.

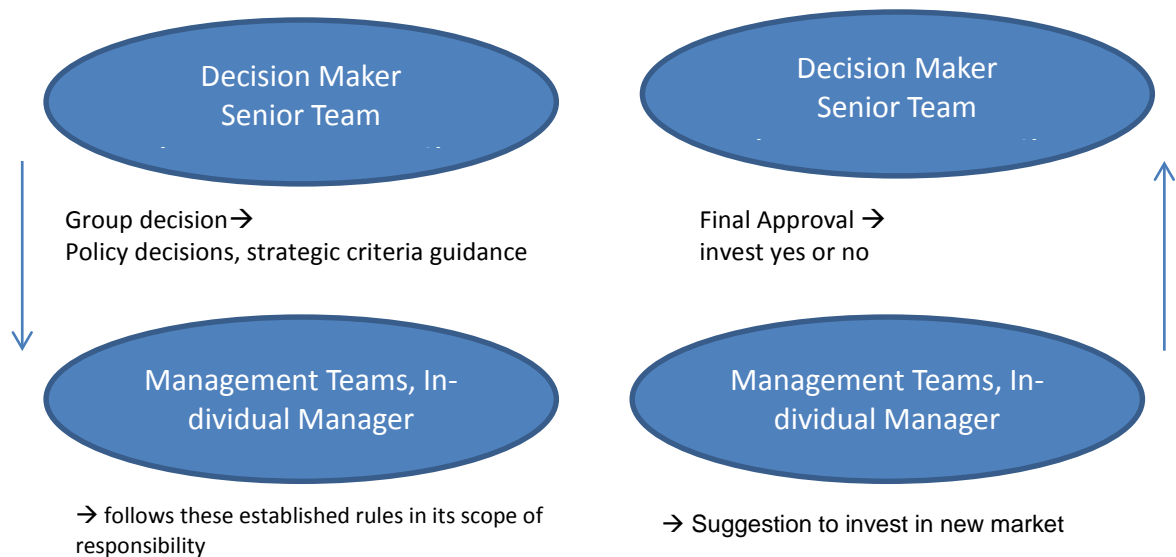


Figure 3.1-24: Decision-making Process

3.1.7 Personal Interests

In the study of Taracki (2013) members of top management teams follow strategic priorities that are relevant for respective area of responsibility and neglected group consensus. Especially during collective decision-making for investing in new projects, personal interest of group members occurred (Kaplan, 2008, Martin 2010). For instance a general manager of a certain BU did not support the best project according to analysis during group decision-making due to his personal interest (Martin, 2010). Additionally during H&R decision-making there was the tendency to promote those employees the group members were closely associated. They tried to support their own candidates and formed coalitions. Interestingly the norm being loyal to your associates is embedded in organisational culture and may be the influencing factor in this final decision-making. (Alvesson & Kärreman, 2007)

3.1.8 Limitations

While searching for relevant literature I had to face many problems which are at the same time limitations of this work. Some of them should be named in the following.

Decision finding

In many cases as for example the study of Shimizu (2007) or Bakker & Sheppard (2013) the process of decision making is not described. It is simply stated that decisions were made. How they were made, how many people were involved and also who

these people are, remains unclear for the reader. In some cases as for example Wageman (1995) solely states, that decisions were made within meetings of the members and that they met face-to-face. Data concerning how decision-making process takes place, which time is needed or if personal interests of the decision-makers have influenced the decision is missing in nearly all case reports.

Distribution of knowledge

The same is held to be true for information and data concerning the distribution of knowledge among the decision-makers. For example, Klein et al. (2006) studied decisional processes within the health care industry and stated that surgical leaders, fellows, surgical assistants, anaesthesiologist, nurses and trauma technicians were involved in the decision process and from the point of their professional training it could be assumed that knowledge is distributed asymmetrically among the decision-members. But it is also meaningful to assume that the distribution of became more symmetrically while corresponding with other decision-makers. But this remains an assumption because nothing like this is stated in most case reports.

Consideration of alternatives

The problem of missing or incomplete information also affects the question whether the decision-makers could choose between one and more alternatives. It is also not clearly said whether yes or no-decisions were made or if they could choose between options of different qualities. This is the case for example the study of Petkova et al. (2014). They examined the decision policy of a “formed team”, not stating of whom this team consisted and therefore also lacking the information concerning the distribution of knowledge addressed elsewhere. Also this team simply decided, not saying for or against a certain venture project or if they could choose between different venturing projects.

The named problems of missing information concerned most analysed articles and is clearly a problem which future investigations later on should address.

3.2 Results of Interviews

3.2.1 Decision Type

Interviewees examined forty one decisions across twenty five organisations that were solved by a certain decision group. Decision tasks were divided into the following categories, “high-”, “middle-” and “low-” impact decisions, while operational topics are part of low impact decisions.

„**High-Impact**“ decisions were solved by teams/groups located high in hierarchy. Most of these decisions are business critical decisions and highly strategy related whereas different skill background is essential (new market, acquisition, investment, market expansion).

“**Middle-Impact**” encompasses decisions that are solved by a whole division or a specific division needs knowledge support of other areas in the company. For instance a new marketing campaign needs finance or human resource know-how and assistance and can't be solved solely by the marketing manager. As a result various people of the company are making together the final decision.

“**Low-Impact**” uncovers operational decisions that are solved within in one department.

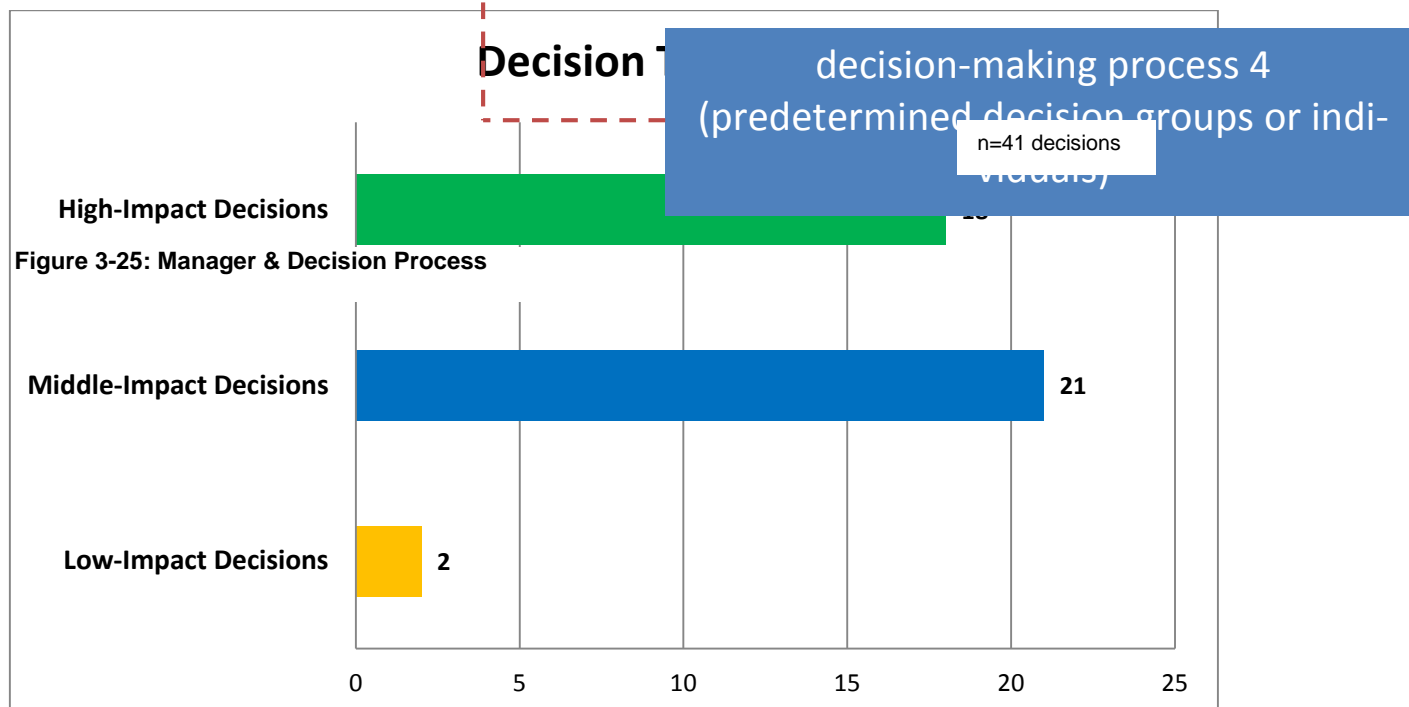


Figure 3.2-26: Decision Type

High-Impact decisions

High-Impact decisions include business critical decisions. In these situations management cannot afford errors in its judgement, complex decision tasks that have a big impact on the organisation as a whole. Certain investment decisions, acquisitions and market expansions are examined and solved by groups because their group skill background is mandatory. Additionally the definition of some organisational policies in terms of strategic guidelines and objectives for subordinated areas are the duty of high located management teams.

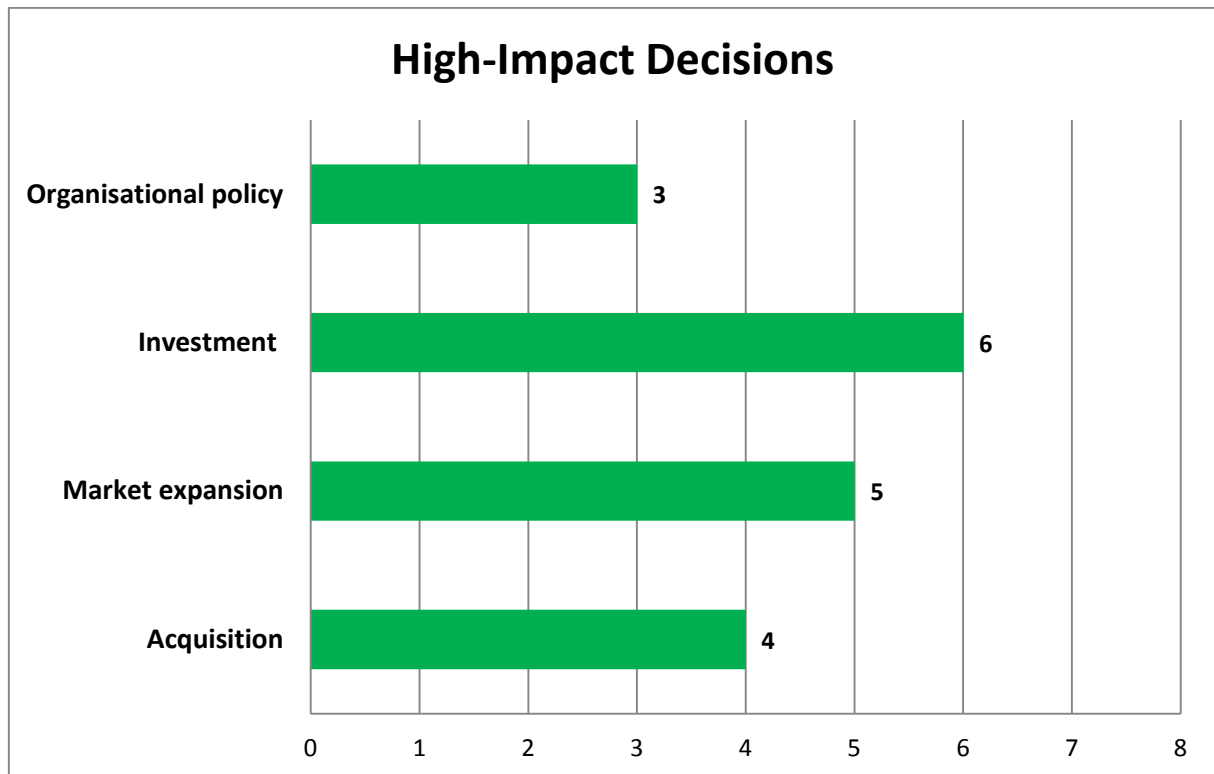


Figure 3.2-27: High-Impact Decisions

Middle-Impact/Cross-Departmental decisions

Middle-Impact decisions have their origin in one department or division of a company (IT, Finance, Human Resource, Marketing & Sale), but are solved by a group whose members are located in different parts in the company. Depending on its importance for the firm and its overlapping characteristic with other departments or divisions, these decisions are solved by a specific group within one department, a certain committee or its solution involves a cross-departmental group. For instance a specific human resource topic needs advice, information and the agreement of other departments of the company which results in a group decision-making process.

Human resource decisions are dealing with topics such as a new incentive system, an organisational learning initiative or organisational structure and culture decisions. Next marketing related decisions are concerned with product development, media mix or certain marketing campaign decisions. Finance decisions encompass topics related to liquidity, cash flow or asset allocation issues. Finally IT decision tasks include decisions linked to a new IT system or other specific IT topics where cross-departmental groups are essential.

Groups that are solving certain finance decisions have a very similar knowledge background and are closely linked in the organisation. For instance managers from risk, accounting and another certain finance department are solving these questions as a group. Whereas human resource, marketing, IT questions often include group members with very heterogeneous backgrounds in final decision-making.

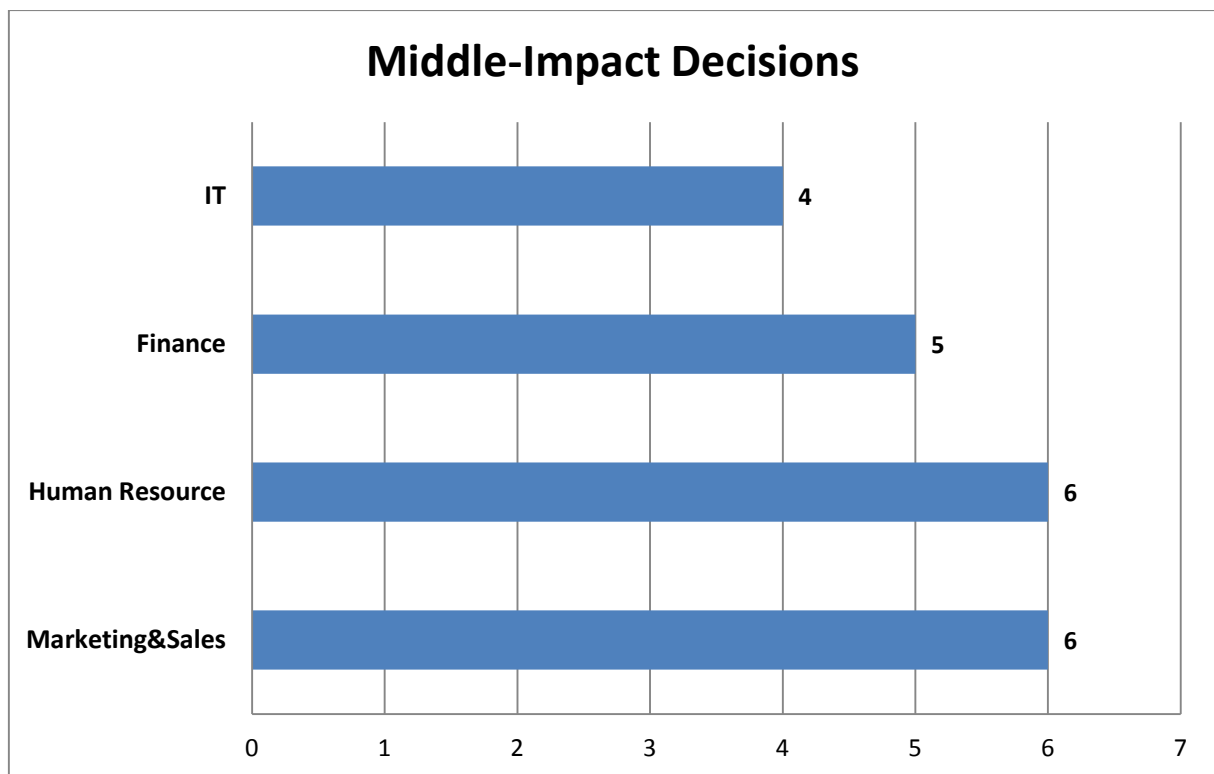


Figure 3.2-28: Middle-Impact Decisions

3.2.2 Decision-making Group

a) Type of Group

Figure 3.2-29 gives an overview of the decision groups that are making certain decisions in the queried organisations. Let me illustrate the composition of the different groups.

Department teams are made up of employees from certain parts of departments (finance, marketing, human resource, IT). For instance an investment group that is part of finance department, a brand management/product development group that is found in the marketing department or the team could be made up of certain employees of the whole finance department. Its group members have very similar knowledge background and are working closely together. This type of group occurred twelve times and made twelve decisions. These agents are concerned with topics linked to their department. In most cases the department manager is part of the team.

Group members of **management teams** are located in middle to high management level. Informants reported the following group structures. These groups consist of different division heads located in the same hierarchy layer with different fields of activity or the team is a mixture of some members of the executive board and other high located managers such as division managers. They are confronted with cross-departmental financial decisions and investment decisions or new product lines, new branches, etc. These management teams solved thirteen group decisions.

Top management team (GmbH) members are merely a group of directors of GmbH companies that are part of an affiliated company. In most cases investment decisions were solved by them and in sum four decisions were made by this entity.

Executive board (AG) is placed at the top of the organisation and this type of team consists only of executive board members, namely "Vorstände". Their decision tasks embrace acquisitions, investments in new market and other business critical decisions. In many cases these agents get recommendations from certain assigned division heads and make on that base their final decision. Executive board members duty is primarily decision-making and informants reported 8 decisions solved by this type of decision group.

Finally **steering committees** are responsible for decisions linked to a specific topic. For instance there exist steering committees that merely solve human resource task, project investments or are assigned with other decision task that are very important for performance and success of a company. These members are a mixture of

different employees from various hierarchy levels and departments. All member exhibits a high expertise for the regarded decision-making tasks. In four cases these groups are/were appointed to make together the final decision for a certain problem set.

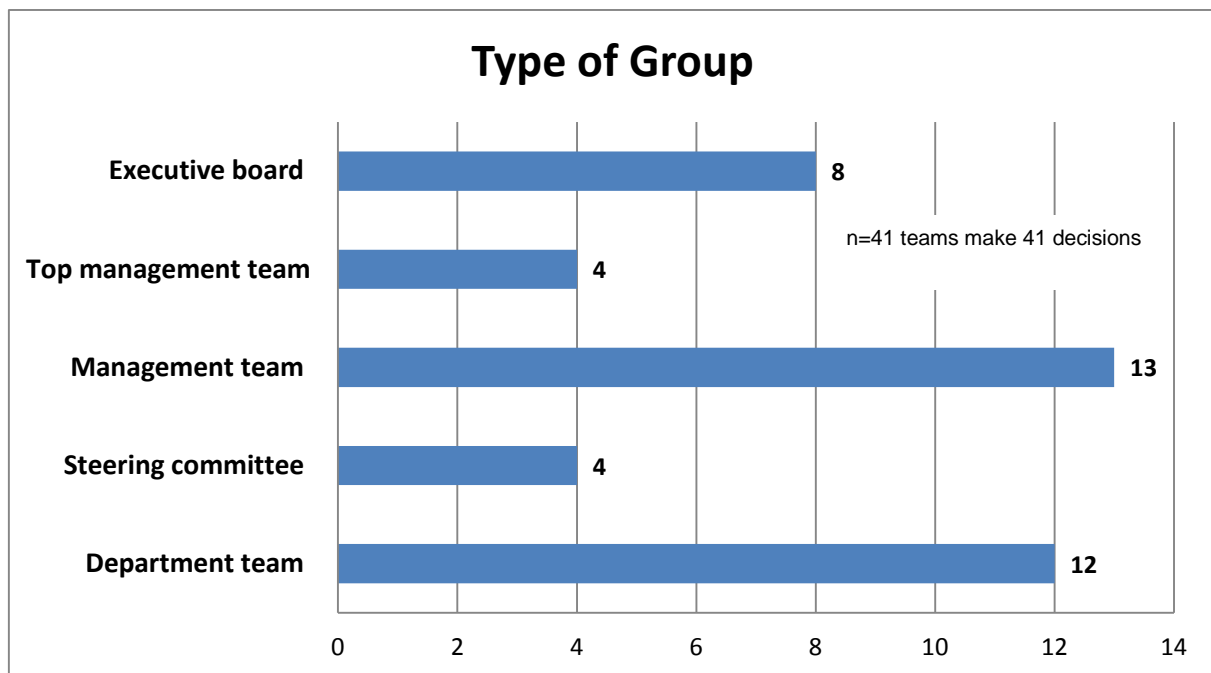


Figure 3.2-29: Type of Group

b) Group Size

Figure 3.2-30 gives an overview of the size of the respective group. Each bar shows the median of the number of agents that are part of the corresponding team, whereas the number in the bracket repeats the frequency of the regarded team.

The interviewees were capable to name the exact size of thirty seven decision groups. For two management teams and two department groups the accurate number is missing.

The median of each team is very similar, namely the decision groups consist of six group members. A slightly tendency occurs when regarding executive boards, their median of its group size is five. Additionally top management teams and executive boards consist of maximum seven decision makers. Hence high located decision groups tend to be smaller in organisations. Finally steering committees are a bit larger in its existence.

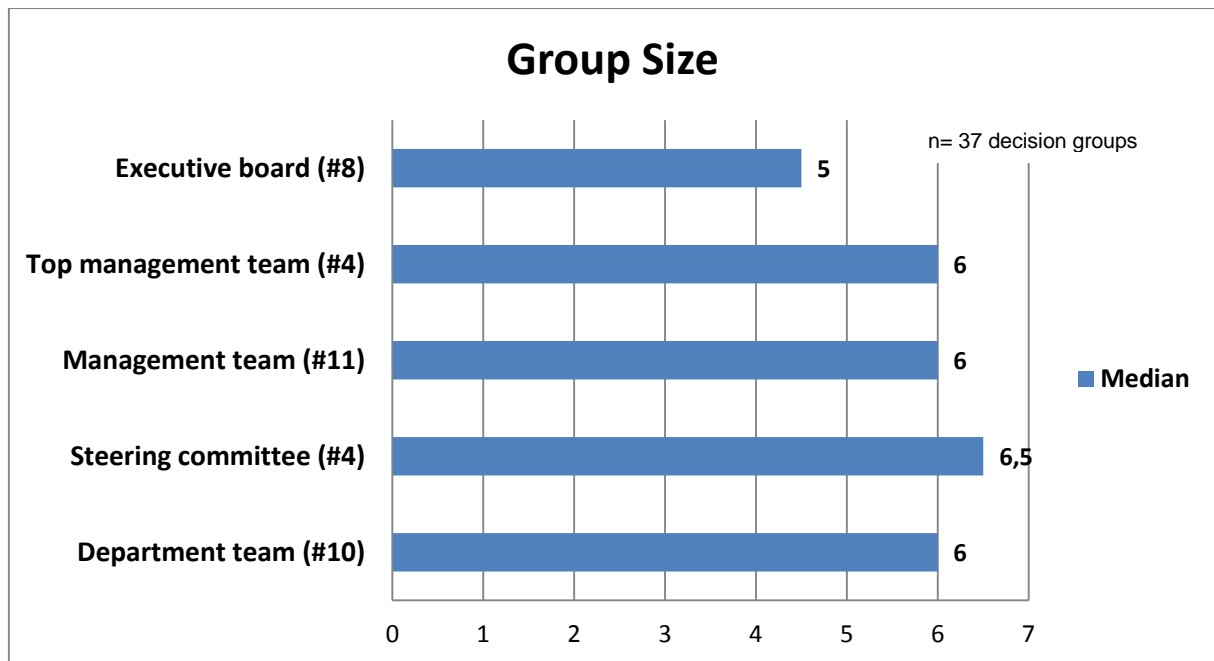


Figure 3.2-30: Group Size

Table 3.2-4: Group Size

Range	Type of Team
3 to 9	Department team (#10)
3 to 10	Steering committee (#4)
3 to 14	Management team (#11)
3 to 7	Top management team (#4)
3 to 7	Executive board (#8)

c) Group Structure and Leadership

Similarities between different groups

- one group leader and team members
- role of group leader: supervises and monitors the group process, organise by him/herself meeting or appoints certain group member for administrative meeting issues

Dissimilarities between different groups

- Background of group members:
 - Department team: homogenous (same field of activity)
 - Steering Committee: homogenous (experts for certain topic)
 - Management team: heterogeneous (mixture of different areas)
 - Executive Board: heterogeneous (different focuses)

- Cohesiveness
 - Department team: focus on team spirit
 - Steering Committee: rational behaviour of group members
 - Management team: conflicts between group members were reported
 - Executive Board: - (information about group members is missing)

d) Communication and Cohesiveness of Group Members

Group leaders plays an important role in the development of the overall communication climate during group meetings. Communication behaviour varies from an open/informal and relaxed to illiberal and stiff habits. The group leader moderates the group meeting and is the one who has the power to stimulate and animate each group member to take part in group discussion.

„Hängt auch stark **vom Führungsstil** wieder des jeweiligen Vorgesetzten, der beteiligt ist ab. Wenn jemand gerne ein **offenes und lockeres Gesprächsklima** pflegt um die besten Ideen auch hören zu können. Dann läuft das anderes ab, als wenn jemand eine **autoritäre Führungspersönlichkeit** ist. (...)Eigentlich sehr gut, das hängt von der **Unternehmenskultur**, ob das eher eine kommunikative Runde ist oder nicht, wie in Summe die Stimmung ist. Wir haben ein sehr offenes Kommunikationsklima und wird auch so vorgelebt von den Vorgesetzten.“ (Interview 16)

„Dass man einen hat, einen **Moderator** gibt oder eben einen Leiter, der es schafft hier alle Mitglieder reinzuholen. Der merkt, dass nicht nur eine Meinung wichtig ist und mehrere Personen ihre Meinung sagen. Wenn zum Beispiel eine Gruppe aus vier Personen besteht, dass wirklich alles etwas beitragen.“ (Interview 2)

„Wir hatten einen internen **Moderator** der uns dabei begleitet hat auf dieser Reise und da hat jeder gleichberechtigt Ideen eingebracht. Das Meeting war sehr konstruktiv, weil jeder war wahnsinnig engagiert, aktiv beteiligt war und das auch geschätzt wird, dass jeder in seinem Erfahrungsschatz abgeholt wird und dass das angenommen wird und diese Ideen eingebracht werden.“ (Interview 3)

„Beim gesamten Entscheidungsprozess in der Gruppe bedarf es immer wieder einer **gewissen Führung**, dass der rote Faden gehalten wird und das ist heutzutage gar nicht so einfach. Wenn sich Sie verschiedene Charaktere aufeinander prallen lassen mit unterschiedlichen Kenntnisständen, weil Sie können es auch positiv interpretieren. Wenn nämlich sich alle einig werden, dann hätten Sie ein Problem in der Firma, weil dann keiner mehr den anderen fordert.“ (Interview 13)

Besides this central figure during focus group, corporate culture, group size and preset guidelines influence communication behaviour of each group member. Some interviewees mentioned that communication rules are defined for negotiation.

„Nachdem wir sehr stark in der Kommunikation tätig sind. Im Nahbereich sollten zumindest die **Gesprächsregeln** beachtet werden, das heißt es gibt schon eine **gewisse Gesprächskultur** von jeden zu Wort kommen lassen, sammeln von Ideen, die Dinge abfassen in Protokollen in Keypoints.“ (Interview 11)

„Es ist halt so **Unternehmenskultur**, denke ich die da schon miteinfließt in so Gruppen immer. Es gibt natürlich immer so diese Gruppendynamik, wo dann einer vielleicht ein bisschen, der der ist der gerne Entscheidungen trifft und ein anderer der sich eher der Gruppe unterordnet oder der halt oft wirklich immer möchte, dass das Team mitentscheidet. Ich glaube das gibt es sicher überall, das gib es bei uns auch.“ (Interview 14)

„(...) was **Kultur** und zu einem großen Teil auch gewollt ist, (...)Es ist eine sehr offene, eine sehr direkte Kommunikation und gepaart mit dem, dass wir hier unglaublich freundschaftlich und kollegial miteinander verbunden sind über Bereiche hinweg, über Hierarchieebenen hinweg.“ (Interview 21)

„Das ist so unterschiedlich. Bei 3000 Mitarbeiter können Sie sich vorstellen sehr sehr unterschiedlich sein wird. Aber dadurch, dass es auch **Regeln** gibt, wie das abzulaufen hat, was wichtig ist, gibt es eigentlich eine ganz eine gute Disziplin in diesen Teammeetings. Dynamik, wo dann einer vielleicht ein

bisschen, der der ist der gerne Entscheidungen trifft und ein anderer der sich eher der Gruppe unterordnet oder der halt oft wirklich immer möchte, dass das Team mitentscheidet. Ich glaube das gibt es sicher überall, das gib es bei uns auch.“ (Interview 7)

Generally all managers reported that group members communicate most of the time in a cooperative way and group members are highly motivated to participate during discussion and decision-making. Definitely certain personality characteristics of each group member have an influence on partaking during group discussion. Due to that informants reported that certain/“sensitive” decision tasks lead to more and intense/emotional discussion.

“Also ich finde da geht es um viel mehr, weil jeder hat eine viel größere Verantwortung und dementsprechend kann **Diskussion** auch **hitziger werden**.“ (Interview 14)

“Ich bin dann eher der **Moderator** der Gruppe. Was man auch bemerkt ist, **dass je größer die** Gruppe wird wenn man im ganzen Bereich etwas diskutiert, desto **weniger Teilnahme** ist an den **Diskussionen**. Wen eine Gruppe 4-5 Personen ausmacht, da haben wir eigentlich die größte Aktivität im Gespräch.“ (interview 8)

„Ich würde es **grundsätzlich** sehr **kooperativ** beschreiben, weil wir ja alle wissen wir müssen gemeinsam zu einer Entscheidung kommen. Es kann natürlich wenn es **inhaltlich ein polarisierendes Thema** ist, kann es manchmal schon **heftigere Diskussionen** geben, es hält da eigentlich niemand mit seiner Meinung hinter dem Berg sondern es sagt dann eigentlich jeder sehr offen was er sich dazu denkt. (...)Also es kann schon sein, dass wir dann für so eine Entscheidungsfindung eineinhalb Stunden diskutieren und uns manchmal dann ein bisschen im Kreis drehen. Das kann schon vorkommen.“(Interview 6)

Analysis of interviews shows that the following tendencies in communication behaviour and cohesion of intra-departmental and cross-departmental groups emerge.

a. Intra-departmental group (similar functional/homogeneous background, close contact)

- Strong team spirit and solidarity
- High willingness to cooperate
- Group members tend to have equal status
- Active and motivated participation
- Fast decision-making
- High group cohesiveness

b. Cross-departmental group (different functional/heterogeneous background)

- Each department may have its own interests
- Lack of willingness to compromise

- Group members may differ in their status depending on field of activity (e.g. Manager of H&R has less power in final decision-making than managers of finance division, Interview 8)
 - Negotiation focus
 - Longer and more hot-tempered discussions until final consensus is reached
 - Low group cohesiveness
- c. Executive team/top management team or other decision groups
- Mixture of a) and b) differences occur between organisations (in one executive team group members know each are working together for a long time and communicate in a friendly way, whereas in another executive team group members tend to have negotiation focus)

“Die **Teams** haben schon einen gewissen Zusammenhalt und gehören irgendwie zusammen und versuchen, eine **kleine Familie vielleicht**, okay das ist unsere Meinung und wir stehen jetzt dahinter. Wir machen das so, weil wir das gemeinsam erarbeitet haben. Wenn Leute von **verschiedenen Bereichen** oder Teams sind und zusammenarbeiten, dann ist es auf der einen Seite vielleicht **nicht so ein starker Zusammenhalt**, eher eine kritischen Diskussion auch. Auf der anderen Seite beleuchtet man auch neue Aspekte und sieht Themen von anderen Seiten Es kann vielleicht ein bisschen hemmend sein, und es dauert länger bis man alle Leute an Bord geholt hat, aber auf der anderen Seite ist es auch gut wenn es von einer anderen Seite betrachtet wird, vor allem wenn es ganz unterschiedliche Leute sind.“ (Interview 9)

3.2.3 Decision Process

a) Filtration of Information and Final Decision-making

Information collection **(F)** happens on a wide base and is the duty of lower hierarchy levels of an organisation. Whereas final decision-making **(D)** is executed in high management level of a small circle. In between preselection of possible alternatives in form of recommendations **(R)** is part of whole group decision process. The subsequent figure illustrates a top-down motivated group decision and its course of activities.

"Zuerst wird das Mal im Rahmen des VP Kreises besprochen. Warum machen wir das so, was ist der Nutzen. Was ist sozusagen die Herausforderung, wie würden wir das angehen und für welche Teams würden wir das vorschlagen. Was wären die Kosten, was wären die Ressourcen die wir brauchen. Das alles diskutieren wir in diesem Kreis. Wenn dann in diesem Kreis es empfunden wird, dass es so sinnvoll und hilfreich ist, wenn nicht brauchen wir es eh nicht umsetzen. Wenn man so sagt ist das so eine Art Vorselektion für Ideen und Diskussion was müssen wir noch mit aufnehmen damit es einen Sinn macht und werden die einzelnen Meinungen und Ansichten geteilt oder ganz anders gesehen. Und mit dem gemeinsamen Ergebnis bzw. Vorschlag geht man dann zu seinem bereichsverantwortlichen Vorstand uns stimmt das zu sagen ab. Aber letztendlich muss man das gemeinsam mit seinem bereichsverantwortlichen Vorstand entscheiden, machen wir das oder machen wir das nicht." (Interview 7)

"dann setzten wir bewusst am Anfang auf ganz ganz viele und machen dann eher den Trichter enger je länger dieses Integrationsprojekt dauert. Am Anfang also, wir 'haben gerade etwas in Planung, starten wir einmal wenn es darum geht zwei Bereiche zusammenzuführen haben wir 80 Leute in einem ersten Schritt, ob das jetzt immer eine entscheidungsrelevant ist. Es geht auch immer neben Entscheidungen zu fällen immer darum, die Leute zu informieren, damit alle Leute den gleichen Informationsstand haben, aber auch immer miteinzubeziehen, was fällt diesem großen Kreis an Leuten sonst noch so auf woran wir möglicherweise noch nicht gedacht haben. Es ist nicht möglich, dass wir in einer kleinen Gruppe alles erblicken, wenn es darum geht in der Strategieentwicklung, was sagt der Wettbewerb, was sagen die Kunden, was sagt der Markt, was können wir auch im Sinne unserer Kernkompetenzen. Da brauchen wir natürlich eine breitere Basis an Information. Die Informationseinholung ist dann auf sehr breiter Basis. Die Entscheidungsfindung letztendlich für das entsprechende Thema ist dann eher ein bisschen enger gestaltet." (Interview 7)

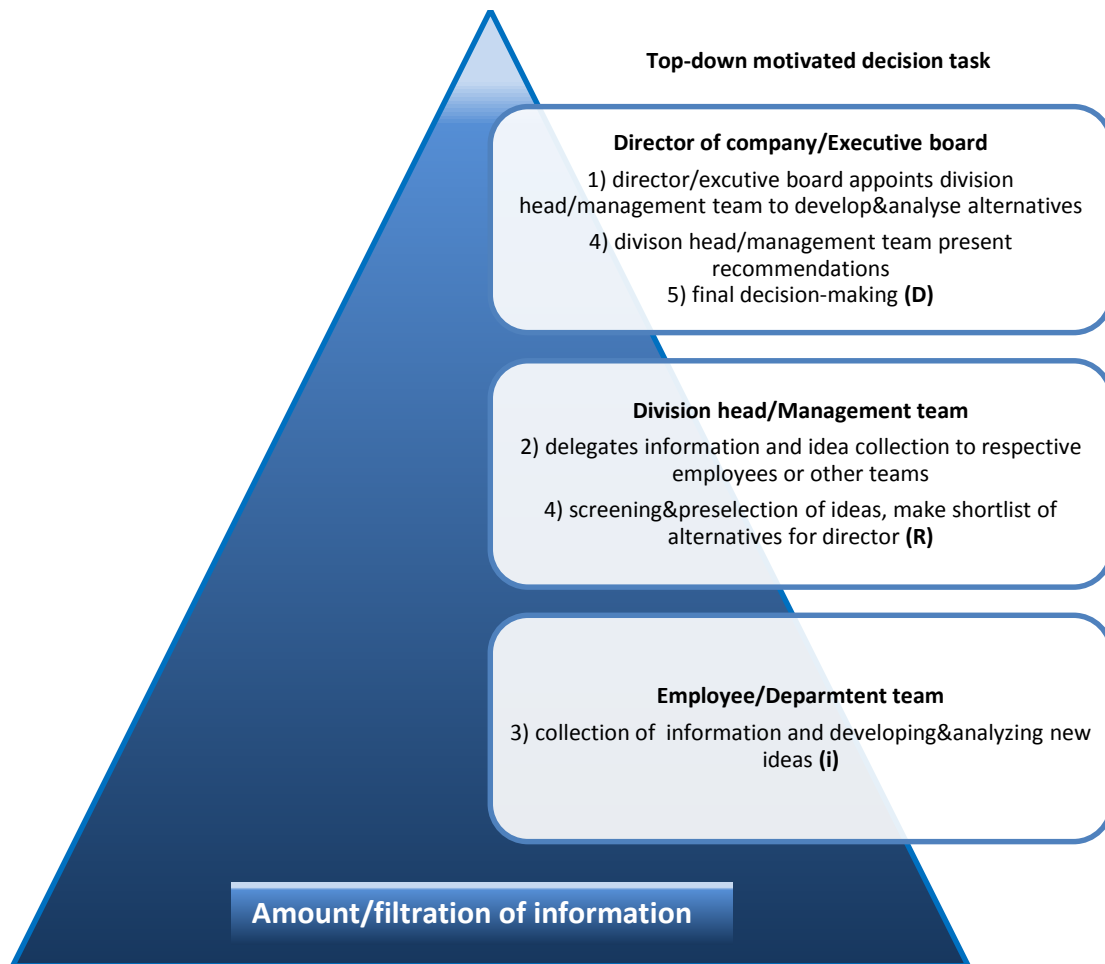


Figure 3.2-31: Filtration of Information

In contrast teams located in high hierarchy levels have to make lots of decisions due to **different origins of decision-making process**. First the analysis of the interviews showed that the origin or initiative for making a certain group decision are motivated top-down, bottom up or used for conflict resolution.

- Top-down motivation: executive team member assigns one or more area heads for preparing and developing recommendations for specific decision task. Final decision will be made by executive team. (e.g. new product development)
- Bottom-up motivation: One or more area heads have a new idea, project etc. in mind or a certain problem arises. Resulting recommendation will be passed to executive team/superior group. Final decision will be made by executive team. (e.g. approval for certain investment of a certain division)
- Conflict resolution: lower management teams are not able to find consensus. Final decision will be made by higher management team (e.g. conflicting interests of lower management team members hinders ability of final decision-making)

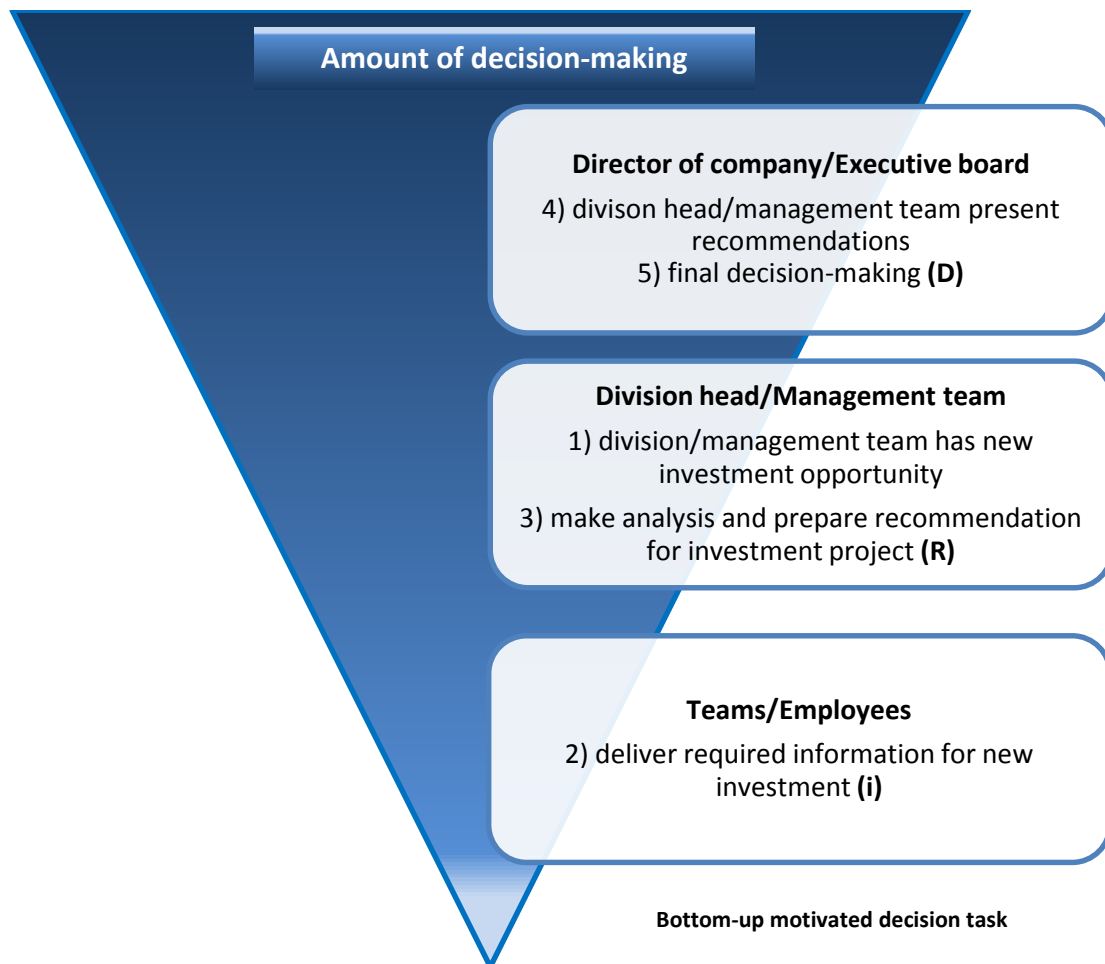


Figure 3.2-32: Frequency of Decision-making

How many hierarchy levels are involved during a decision-making process depends on the general framework of decision-making of an organisation and on the considered decision task. Interviewees indicated that scopes of managers' responsibility are clearly defined in provided documents or part of code of practice. Moreover certain process steps are fixed. Managers mentioned that particular governance documents prescribe when a manager is entitled to decide alone (surely he could use a group as well) and under what circumstance decision has to be made as a group. For instance particular departments of an organisation have predetermined financial limits for investing. As soon as this limit is exceeded a superior manager or a certain committee has to decide whether to allocate the requested money or not. Extraordinary high investments will be passed to management teams located in the highest hierarchy layer. In addition the circumstance that two or more leading area managers are not able to make together final decision for a regarded topic due to not finding consensus together, leads to multi-level decision-making as well.

b) Information Search

As already mentioned organisational structure is one influencing factor for the flow of information between employees, group members, teams, departments and whole divisions of an organisation. As cases indicate several hierarchy layers have to be passed until final decision can be made. Moreover the decision-process itself is shaping information exchange between agents of a company and vice versa.



That flexible and complex relationship makes it very hard for the informants to replicate the information process linked to a certain decision task. Interviewees pointed out that they are concerned with more decisions, projects, etc. simultaneously. Hence information search and exchange for regarded topics happens incidentally every day. Managers maintain contact to lower hierarchies in order to get requested information linked to certain decision tasks. In addition several different **media channels** (see in chapter c) "Information Exchange", "unstructured information") are used for getting required information.

c) Information Exchange

Hence all these above mentioned factors lead every time to different information exchange processes between group members prior to and during final group decision-making for considered decision tasks. The following information activities were identified and are classified in structured and unstructured information sources.

- **Structured information**

Respective teams have their meetings called "jour fix" periodically (weekly – monthly) where they exchange general information, discuss and make decisions. Informants reported that participation is high and if required videoconferencing is used. Minutes of meetings with their key points and decisions made are recorded and group members have access to them.

When important issues arise and have to be discussed and/or decided ad hoc meetings are getting organized and agents that are concerned are partaking. More meetings at frequent intervals are taking place if required.

- **Unstructured information**

Informants reported that besides regular meetings group members use the following information channels:

- Open floor concept (immediate information exchange)
- Face-to-face (informal meetings at lunch, dinner etc.)
- Telephone, Mail, Video-,telephone-conferencing
- Share point (documents, reports, etc.)

In most cases required information exchange activities for regarded topic between different hierarchy layers were reported dimly by the informants. In some cases it was mentioned that members of superior groups are involved in analysis and final recommendation of subordinated managers **(R)** and get continuous information updates about regarded topic. As a consequence some or all members of the superior group possess relevant information about regarded decision task ex ante to final official decision-making meeting **(D) (FA)**. Figure 3.1-31 and figure 3.1-32 illustrate this multi-layer decision process and its linked information activities.

d) Level of Information prior to Final Decision

The respective **level of information prior to a decision** of each group member varies depending on the topic. For one decision task group member A and B are picked by the group leader to collect relevant data and to spread relevant information and analysis across team members prior to meetings and final decision-making. For another issue only group member C is appointed to gather and distribute info and facts on behalf of the team. The question is whether each group member has the motivation to read and work through provided information and analysis of certain decision (especially if decision is not touching his/her area or has any consequences for his/her area, no benefit) prior to respective meetings or waits until the presentation in the respective meeting. Some informants reported that information concerning a specific decision task are sent in advance or every group member has the opportunity to access the data on a sharing point, but many mentioned that in practice group members are very sloppy in informing oneself in advance for a certain decision task. Other interviewees told that sometimes beforehand information is not made accessible to every group member due to administrative problems.

The next graphic representation shows information collecting activities and the respective information level of group members prior to decision-making and during the whole process. This illustration presents the information process for group decisions

that occurred many times in this sample within various decision groups (department team, management team, top management team).

By the means of two different decision tasks (Y and Z) that are both solved by the same department team/management team (heads of divisions or mixture)/top management team, differences in information collection activities and group members levels of information of agents will be shown (percentage numbers are assumptions, they were chosen to illustrate the differences of information sets of agents). All members possess decision power, whereas the question is whether all group members participate with the same effort during discussion and final decision-making. As interviewees indicate the final decision-making procedure varies between groups. For detail discussion see chapter f) "Final Decision-making" in section 3.2.3 "Decision Process".

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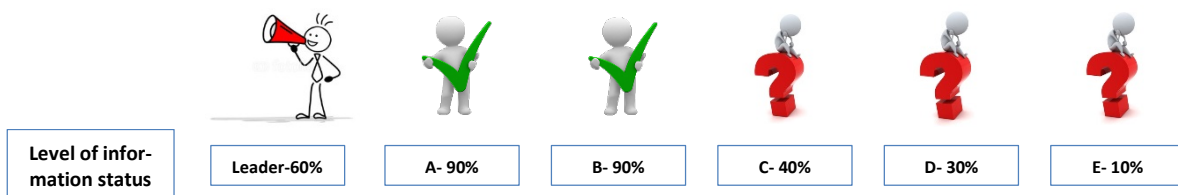
Decision Y

I. Prior to first meeting for regarded decision task

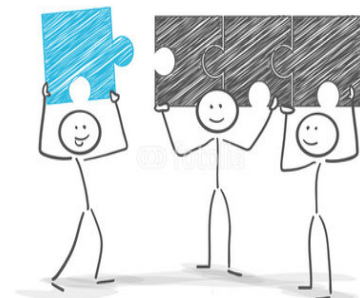
- a. Group member A and B (assigned by group leader) gather intensively information for decision task, if required make first analysis
- b. Other group members could collect information at their discretion (agent E) or are also obliged to gather important information (agent C and D) from their area for decision task
- c. Information is stored at a share point and/or is distributed via email across group members

II. Beginning of first meeting

- a. Group members have different levels of information; agent A&B collected most information, C and D gathered some relevant information from their area, agent E was maybe not interested/had no time/no motivation/no incentive for this topic Y

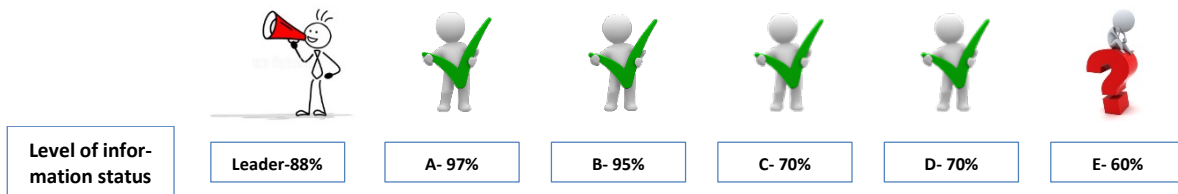


- b. Presentation of group member A&B (analysis, data, ideas, recommendations etc.)
- c. Discussion as a group (new inputs, evaluation of alternatives, etc.) with group leader who gives direction to his/her team, guides communication and conversational atmosphere



III. End of first meeting

- a. Group members have new levels of information. The question is whether updated information level is sufficient for making a “good” final solution?
- b. If further analysis, data etc. are required, group will make final decision in another meeting



IV. Final decision-making (see section 3.2.3, f) “Final Decision-making Procedure” for details)

- a. Group makes together final decision with its “chosen” decision rule (most of the time best practice and is not prior to decision-making defined) as soon as it feels ready for it. Leader guides this process of decision-making.
- b. If no consensus is found, leader will decide or final decision will be made in next meeting when no time pressure exists.

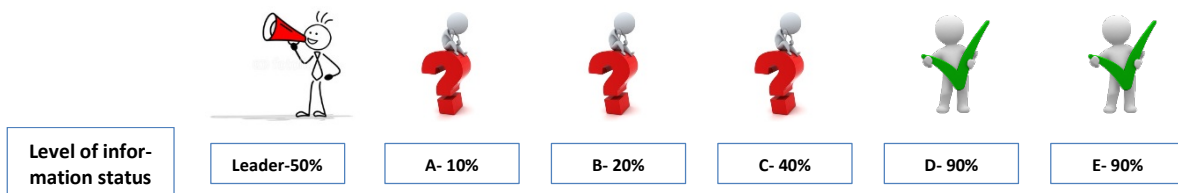
Decision Z

I. Prior to first meeting for regarded decision task

- a. Group member D and E (assigned by group leader) gather intensively information for decision task, if required make first analysis
- b. Other group members could collect information at their discretion (agent A and B) or are also obliged to gather important information (agent C) from their area for decision task
- c. Information is stored at a share point and/or is distributed via email across group members

II. Beginning of first meeting

- a. Group members have different levels of information; agent D&E collected most information, C gathered some relevant information from their area, agent A and B maybe were not interested/had no time/no motivation/no incentive for this topic Z

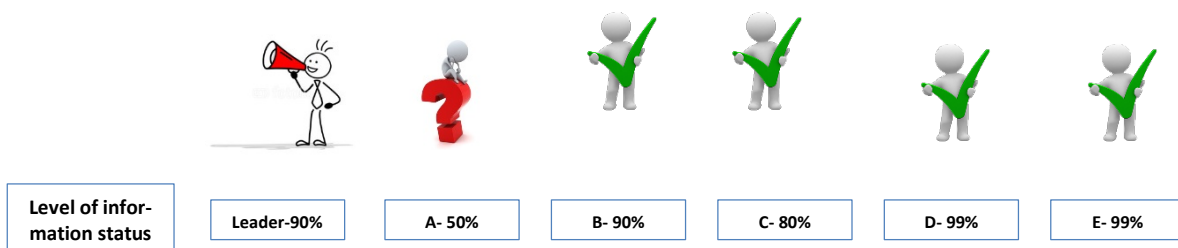


- b. Presentation of group member A&B (analysis, data, ideas, recommendations etc.)
- c. Discussion as a group (new inputs, evaluation of alternatives, etc.) with group leader giving direction to his/her team, guiding communication and conversational atmosphere



III. End of first meeting

- a. Group members have new levels of information. The question is whether updated information level is sufficient for making a “good” final solution?
- b. If further analysis, data etc. are required, group will make final decision in another meeting



IV. Final decision-making (see section 3.2.3, f) “Final Decision-making Procedure” for details)

- a. Group makes together final decision with its “chosen” decision rule (most of the time best practice and not prior to decision-making defined) as soon as it feels ready for it. Leader guides this process of decision-making.
- b. If no consensus is found leader will decide or final decision will be made in next meeting if no time pressure exists.

These examples show that the decision task guides information collection behaviour of each group member correspondingly resulting in different information sets of participants. As soon as the first meeting and discussion for regarded decision task is taking place, information exchange between agents leads to new “updated” information sets of group members. The examples above show that for different decision task information channels are fixed, but information collection and exchange activities of agents vary respectively. For one decision task group member A and B are appointed by group leader to gather data linked to decision topic, to store it at a share point or to distribute it via email across all group members and to exchange information subsequently in the next meeting. For another decision task group member D and E set this required course of activities. One can assume that information collection activities will have influence on subsequent final decision-making. Although all group members have the possibility to have a voice in final decision-making, their ability to judge and to place arguments are limited to their corresponding information sets.

See section 3.2.3, f) “Final Decision-making Procedure” for a more detailed discussion about final decision-making procedures by groups in organisations.

e) Meeting Structure

As mentioned above in section “c) Information Exchange” teams of an organisation have team-meetings on a regular basis. The meeting cycle of different teams are quite similar and are structured in this way:

Before meeting:

1. Agenda of meeting (topics and decision tasks) is sent in advance with relevant documents & presentations

Meeting:

2. Agenda of meeting is presented
3. General information update
4. Presentation of topic
5. Information exchange and discussion linked to decision task
6. Decision-making
7. – Presentation of next topic

After meeting:

8. Minutes of all decisions via mail shared

Informants pointed out those group meetings in higher hierarchies were more formal and structured. Meetings in lower hierarchies tend to be less structured and informal.

Meeting purpose decision vs. information

The purpose of meetings is often different depending on the hierarchical level of participants: information exchange in lower hierarchical levels and decision-making in higher levels. For instance meetings of department teams are more concerned with information collection and exchange or making analysis etc. for certain enquiries of higher managers. As a group, they are solving a smaller amount of problems together during one meeting. In addition due to the fact that their decision authority is limited, important decisions are passed to a higher management team.

In contrast certain committees or top management teams have more time for decision-making. Thus during meetings a greater number of decisions are made by these teams and less time is spent on information exchange. As a result the flow of information is thinned out the higher the hierarchy level is as the figure 3.2-31 presents.

Moreover managers revealed that during this information transfer important issues may get lost.

Number of Meetings

Figure 3.2-33 shows the number of meetings that are required for final decisions. As one can see for reaching final decisions not necessarily many meetings are mandatory. It can happen that final decisions are going to be made just after one meeting. Of course it turned out that for complex issues more meetings take place. Concerning the answers of the interviewee towards the number of the meetings it is to say that many of them could not remember precisely. Instead of a number they reported factors listed in the figure 3.2-34 (multiple answers are included). For instance “deadline” and “complexity of decision task” are decisive issues for reaching final decisions. The informants pointed out that for simple decision tasks and short time horizons only a few meetings were necessary until final decision was reached. Less important are “level of information of members”, “consensus in group” and “group leader”. “Approval of hierarchy level” was mentioned five times. The interviews revealed that group leaders, agreement of group members and formal organisational structure can delay or improve the speed of decision-making as a group.

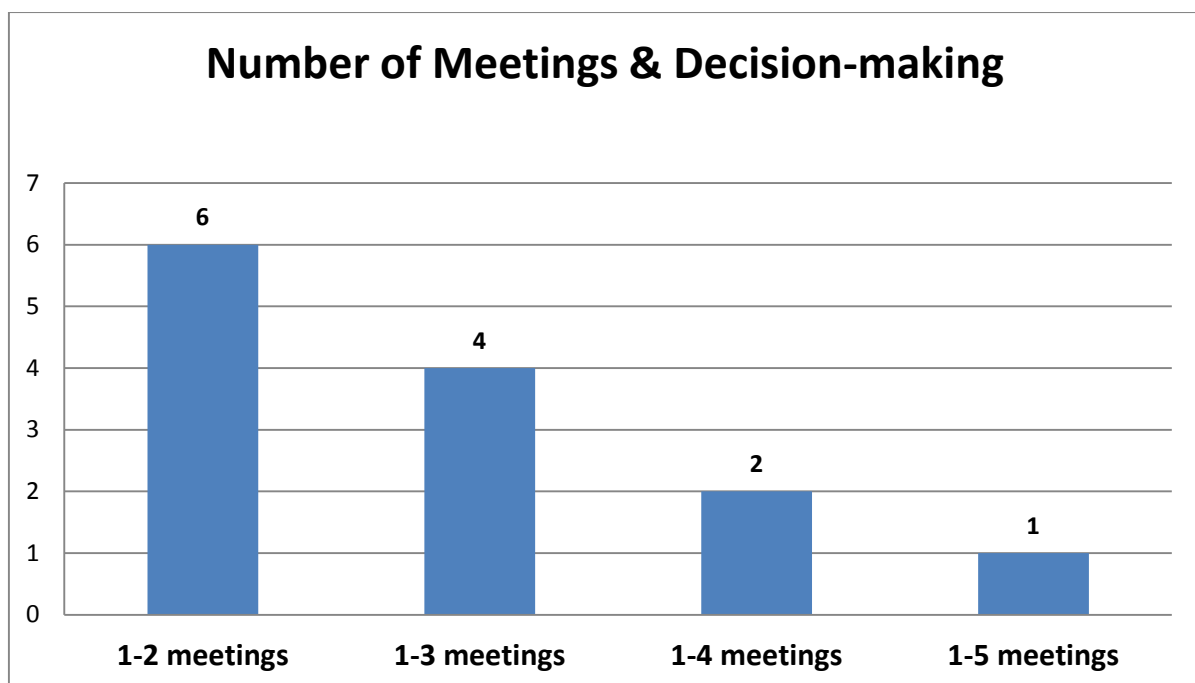


Figure 3.2-33: Number of Meetings & Decision-making

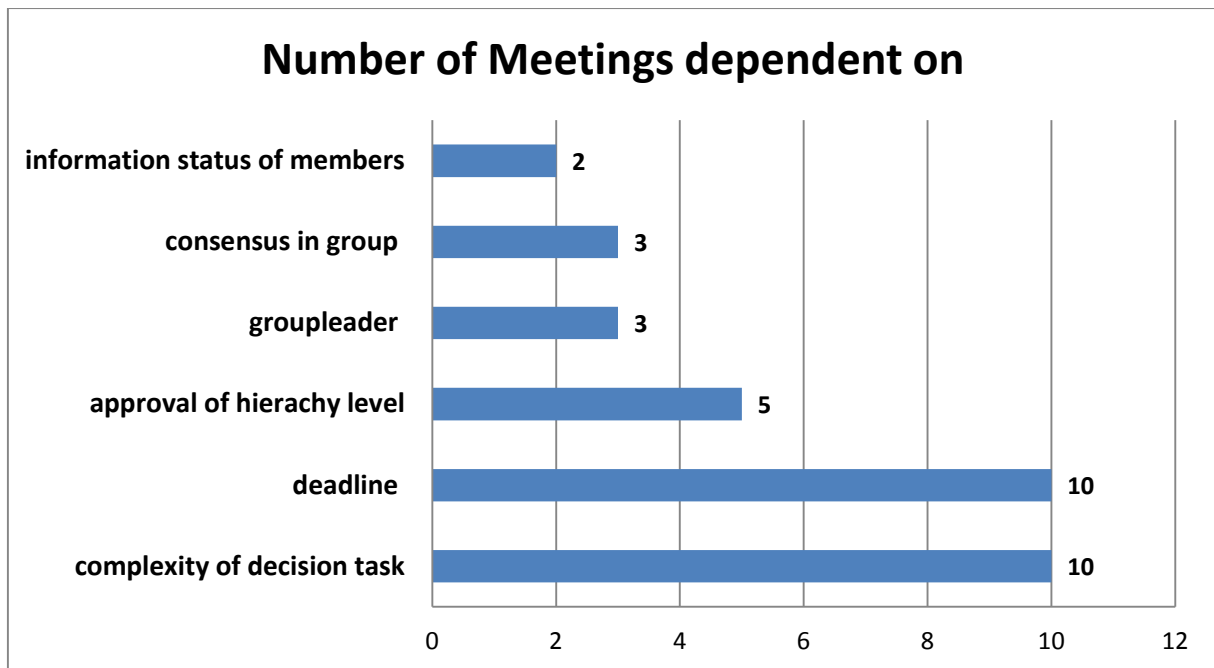


Figure 3.2-34: Number of Meetings & Reasons

Alternatives

Figure 3.2-35 shows the number of alternatives considered before a final decision was made by the group. For forty one decisions in thirty nine cases the informants were able to provide a precise number how many options were up for discussion. In most cases the group was dealing with decision tasks resulting in twenty yes/no answers. Three times was reported that two possibilities were regarded during decision-making. In one case the group could choose from six possible solutions namely which supplier would be the best one for a certain area in the organisation. Five alternatives were analysed and examined by the group for project investment decisions. The median of alternatives is three, while yes or no answers are not included in the calculation. The process how the groups came to the possible options for final decision-making or who made the suggestions for the alternatives were not clearly reported by most interviewees. In some cases the group leader gave his/her team possible alternatives the group can choose from or a group member had certain ideas or recommendations for decision-making. Finally during the meetings brain storming events took place and the alternatives were generated as a team. Groups such as the executive team got recommendations from subordinated leaders who were assigned to make a preselection and to present the final result during an executive meeting. The interviews revealed that generation of alternative solutions was the duty of subordinated employees. Higher

located teams got a preselection of alternatives for final decision-making generated by groups from lower hierarchy levels.

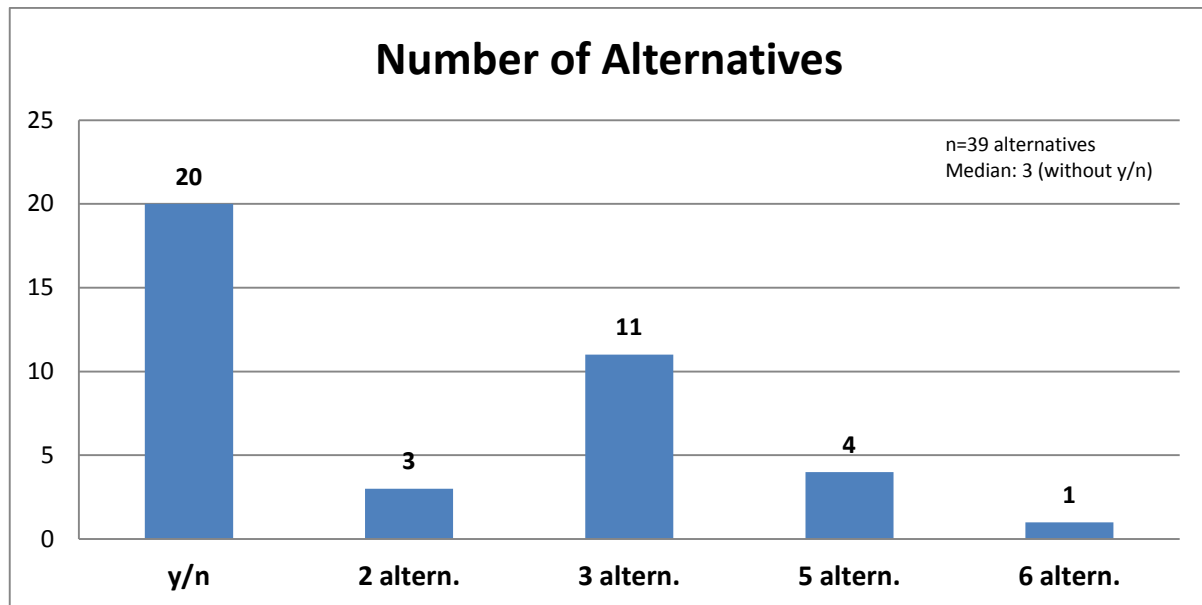


Figure 3.2-35: Number of Alternatives

f) Final Decision-making Procedure

The last step in the group decision process is reaching final agreement as a group. According to Laux (1979, p. 71) decision-making rules are determined by a manager located higher in hierarchy in the organisation. Interviews revealed that the leader of a decision group may define formal rules for the group or organisational guidelines ask for a specific voting scheme. Generally speaking groups in organisations tend to follow total consensus, meaning final decision is the result of discussion until all group members agree and as a result voting procedure is not necessary. However in some instances a voting scheme is part of final decision-making.

„(...) ist es bei uns immer eine gemeinsame Entscheidung. Wie jetzt da der Prozess ist, kann unterschiedlich sein, aber schlussendlich schauen wir dass das alle mittragen und wir sagen ja gemeinsam machen wir das so.“ (Interview 2)

Although predetermined decision rules exist due to managers or firm's motivation, survey indicated that managers do not necessarily execute them for every decision task. For instance in high hierarchy levels such as the Executive Board, decision rules are predefined, but members prefer to discuss in detail and to make final decision only when consensus is reached as a group.

„Bei uns ist es so, gibt es hier eigentlich keine formelle Praxis, das man wirklich mit Handaufzeigen hier abstimmt. Es ergibt sich aus dem Gespräch, natürlich wird alles entsprechend protokolliert. Sagen wir mal so, manche Kollegen behalten es sich vor im Protokoll darauf zu verweisen, dass sie dagegen sind. Wenn zum Beispiel der CEO sagt er hält das für eine ganz schlechte Idee und möchte das protokolliert haben. Das ist dann eine Möglichkeit, (...) (Interview 10)

Results of the interviews show that the following four types of decision-making rules are used by groups.

Consensus

After the expression of group members' opinions, the group chooses an alternative that all group members accept fully or at least to some extent. Discussion will be held as long as all group members are "on board" or a reasonable compromise can be made. These procedures do not show strong variation between groups, but discussion style can be more harmony oriented or aggressive.

Consensus with Qualification

Using this procedure interviewees clearly stated that the group leader or higher authority of firm decides when no consensus will be reached by the group.

Interestingly two managers stated that when personal interests of group members for a topic prevail during discussion, he/she prefers to make final decision on his/her own. Moreover manager uses his/ her power to fine-tune group decisions in order to incorporate strategic aspects in final decision. For this type of final decision-making no differences exist between several groups.

Voting

With a voting procedure the group chooses the alternative that is favoured by more than half of the group members (majority vote). In these instances decision rule was predefined and only group members that were entitled to vote make final decision. In some organisations open voting with hand signs was performed by groups. It may limit overly long discussions.

Consensus with Voting

One informant stated that if no consensus was reached through discussion, team leader used a voting procedure to get final solution. Tables 3.2-5-8 give examples for every final decision-making procedure.

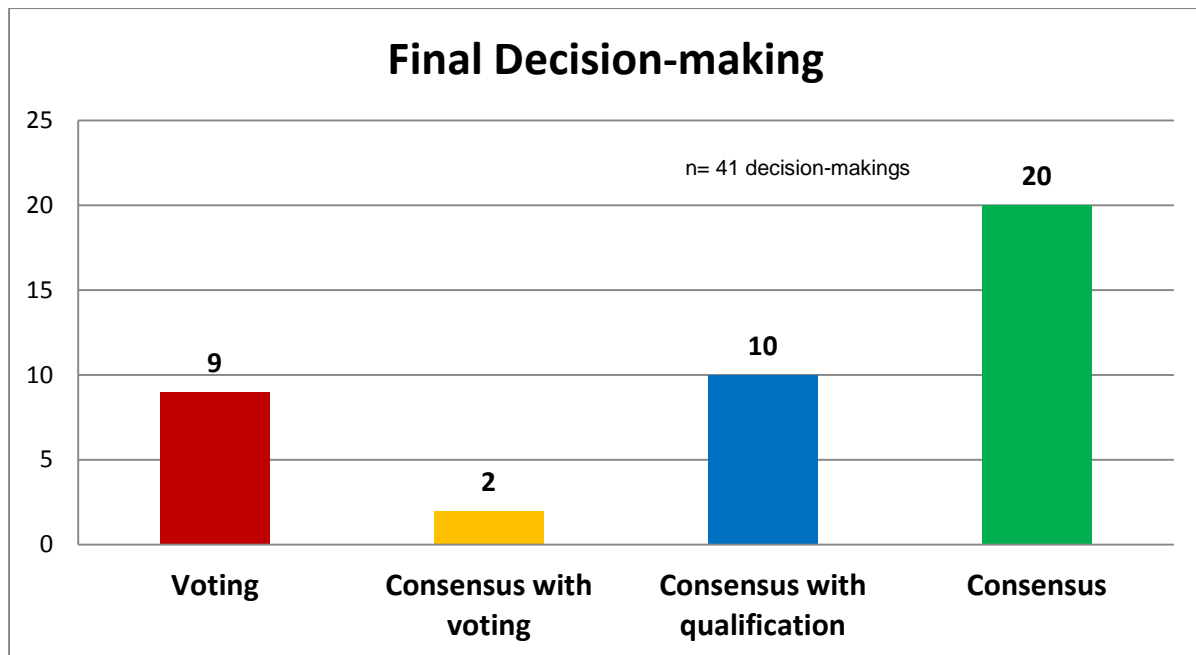


Figure 3.2-36: Decision-making Rule

Table 3.2-5: Decision-making Rule – Consensus with Qualification

Consensus with Qualification	
Firm and Team	Examples
Firm 9 Management Team & Department Team	„Unterschiedlich. Es ist sehr viel offene Diskussion bei uns. In neun von zehn Fällen diskutieren wir die Sachen aus, dass wir wirklich alle einer Meinung sind. Was aber auch hin und wieder vorkommt, ist dass wir nicht eine Meinung finden, dass ein Kollege im Team sagt, nein er/sie sieht das anders und das ist auch okay und gut so, aber dann muss entweder ich oder der Teamleiter je nach dem in welchen Rahmen das gemacht wird eine andere Entscheidung treffen, der dann sagt so machen wir das. Das wird dann natürlich auch begründet, vor allem ist das dann auch wichtig glaube ich, wenn jemand oder zwei drei Leute nicht dabei sind und denen erklärt warum haben wir das so gemacht, aber grundsätzlich gilt dann die Entscheidung nach der Hierarchie.“
Firm 6 Management Team & Department Team	„Also gleiches System eine Ebene darunter. Da bin ich im Prinzip die letzte Instanz und könnte das Team überstimmen. Sofern es Entscheidungen gibt wo man Prioritäten setzen muss, (...), dass man sagt okay, da will natürlich jeder Brandmanager das Maximum für sich herausholen und da ist es natürlich meine Verantwortung zu sagen im Rahmen des Gesamtbildes machen wir das so und das so. Das wäre dann meine letzte Entscheidung.“
Firm 16 Management Team	„Das hängt davon ab, ob es ein Thema ist, das mehrere Bereiche betrifft. Wenn das der Fall ist, wird das offen diskutiert und meistens schließt sich dann der Geschäftsführer der Empfehlung der Gruppe oder der Einzelperson an. Muss aber nicht unbedingt der Fall sein. Wenn sich die Bereichsleiter nicht einigen können entscheidet der Vorgesetzte. Eine Grundregel ist, dass dann die Entscheidung akzeptiert

	werden muss. Dann hat jeder seine Chance seine Sichtweise einzubringen auch wenn die Entscheidung anders ausfällt müssen das alle anderen mittragen.“
Firm 12 Top Management Team	„In der Regel ist es jetzt so, dass wir auf der Geschäftsführerebene eigentlich mit einer Stimme entscheiden, das heißt zu dritt die Entscheidungsmöglichkeiten durchdiskutieren und auch zu dritt zu einer Meinung kommen. Sollte das nicht der Fall sein, haben wir noch immer die Möglichkeit den vierten Geschäftsführer hinzuzuziehen, der auch Kraft seiner noch höheren Stellung nämlich als Konzern-Geschäftsführer dann im Bedarfsfall noch so wirklich die finale Entscheidung treffen kann.“

Table 3.2-6: Decision-making Rule – Consensus

Consensus	
Firm and Team	Examples
Firm 2 Department Team	„ (...) ist es bei uns immer eine gemeinsame Entscheidung. Wie jetzt da der Prozess ist, kann unterschiedlich sein, aber schlussendlich schauen wir dass das alle mittragen und wir sagen ja gemeinsam machen wir das so.“
Firm 13 Top Management Team	„Das ist ein demokratischer Prozess. Ich glaube der Prozess des Abstimmens erfolgt ohne Handzeichen, das will ich so mal sagen. Ab letztendlich kommt man zu einem Entscheidungsvorschlag. Es werden auch Kompromisse eingegangen. (...) Sie müssen ja auch sehen, dass zwischen einer städtischen und einer ländlichen Region auch Unterschiede bestehen, der eine liebt es wenn Holz verwittert und der andere möchte Kunststoff haben. Und daher muss man bei diesen Dinge, diese Sachen auch bedenken. Aber auch da kommt man zum Konsens.“
Firm 15 Management Team	„Eine Diskussionskultur zwischen diesen drei Personen. Die sich durchaus emotional auch laut, mit gegenseitigen Meinungen kommt, (...), finden sie sich dann eigentlich schon immer im Kompromiss. Also es gibt jetzt keinen von den dreien, ich bin eigentlich die Nummer eins und ich entscheide für uns alle. Sondern es ist eigentlich schon immer eine Konsensentscheidung da.“ „Ja, es ist nicht so, dass einer dann vorträgt und Entscheidungen trifft, die dem anderen sozusagen nicht passen. (...) sehr ähnlich denkende Menschen auch von der Persönlichkeitsstruktur sehr ähnlich, das heißt sie verstehen sich was der andere meint und verstehen was die Idee dahinter ist und wie Entscheidungen dann im Konsens getroffen werden.“
Firm 5 Executive Board	„(...) mit vier Personen ist es oft schwierig zu einer Entscheidung zu kommen. Grundsätzlich ist eigentlich nach Möglichkeit einstimmig. Wenn sich jemand nicht wohl fühlt, kann er das auch sagen und dann muss das noch einmal diskutiert werden. Es wird niemand overruled.“

Table 3.2-7: Decision-making Rule – Voting

Voting	
Firm and Team	Examples
Firm 2 Steering Committee	„Wir haben so Gremien im Konzern, wo man ein Kreditlimit, kein Kunde ohne Kreditlimit das kommt aus dem Bankenwesen. festgesetzt hat und als Gruppe wird dann abgestimmt.“
Firm 10 Executive Board	„Es gibt eine Abstimmungsregel, die kenne ich jetzt (...) aber nicht ganz genau, eine vordefinierte Regel, wo es dann heißt teilweise sogar einstimmig oder Mehrheitsbeschluss. Das ist dann aber definiert.“
Firm 20 Executive Board	„Offiziell stimmberechtigt ist der Vorstand. Jeder hat eine Stimme. Im Falle der Stimmgleichheit, kriegt der CEO eine zweite. Bei einer Pattstellung. Unterm Strich ist es natürlich so, dass die auch mitwählen.“
Firm 11 Management Team	„(..) wir versuchen bestmöglich Mehrheitsentscheidungen zu schaffen. Das ist uns sehr wichtig. (..)abgestimmt ganz klassisch mit aufzeigen. Wir haben eine Gesprächs-, und Unternehmenskultur wo wir keine geheime Abstimmung benötigen.“
Firm 14 Management Team	„Dann müssen alle betroffenen Bereiche, mehrere Personen mitabstimmen. Sollte man sich vielleicht nicht einigen, dann liegt die letzte Entscheidung bei unserem Vorstand. Eigentlich versuchen wir bei der Entscheidungsfindung sehr effizient zu sein sonst kommt man überhaupt nicht weiter.“

Table 3.2-8: Decision-making Rule – Consensus with Voting

Consensus with Voting	
Firm and Team	Examples
Firm 4 Top Management Team & Department Team	„Es entwickelt sich im Gespräch heraus. Du merkst relativ schnell eine Tendenz. In den meisten Fällen haben wir eine positive Entscheidung. Da wird dann gesagt ist das für alle so okay, aufgrund der ganzen Diskussionen. Dann sagen alle okay und die Sache ist erledigt. Also so wie ein Abstimmungsprozess. Das eine oder andere Mal passiert es wirklich, dass der Chef dann sagt, gut dann stimmen wir jetzt ab. Wer ist dafür wer ist dagegen, das ist auch schon passiert. Sobald es zu keiner Einigung kommt, entscheidet die Mehrheit.“

From next figure 3.2-37 it becomes apparent that consensual decision-making was used by any group for different decision tasks and seemed to be a trend in organisational decision-making. The decision procedure “consensus with qualification” was employed by all groups except the executive board. In order to limit long discussions, a leading manager had the power to overrule the team. As seen from the graph lower management teams needed one person who decided or a manager used a voting procedure (“consensus with voting”) when the group was not capable of reaching final agreement.

Although in Executive Boards voting rights of group members were defined in certain governance documents and formal protocols no voting procedure (e.g. hand signs) was carried out by the group but in some instances during formal practice. Instead through debate opinions were shared and final decision was developed from discussion. Executive boards were more likely to use voting procedures than any other group as shown in figure 3.2-37.

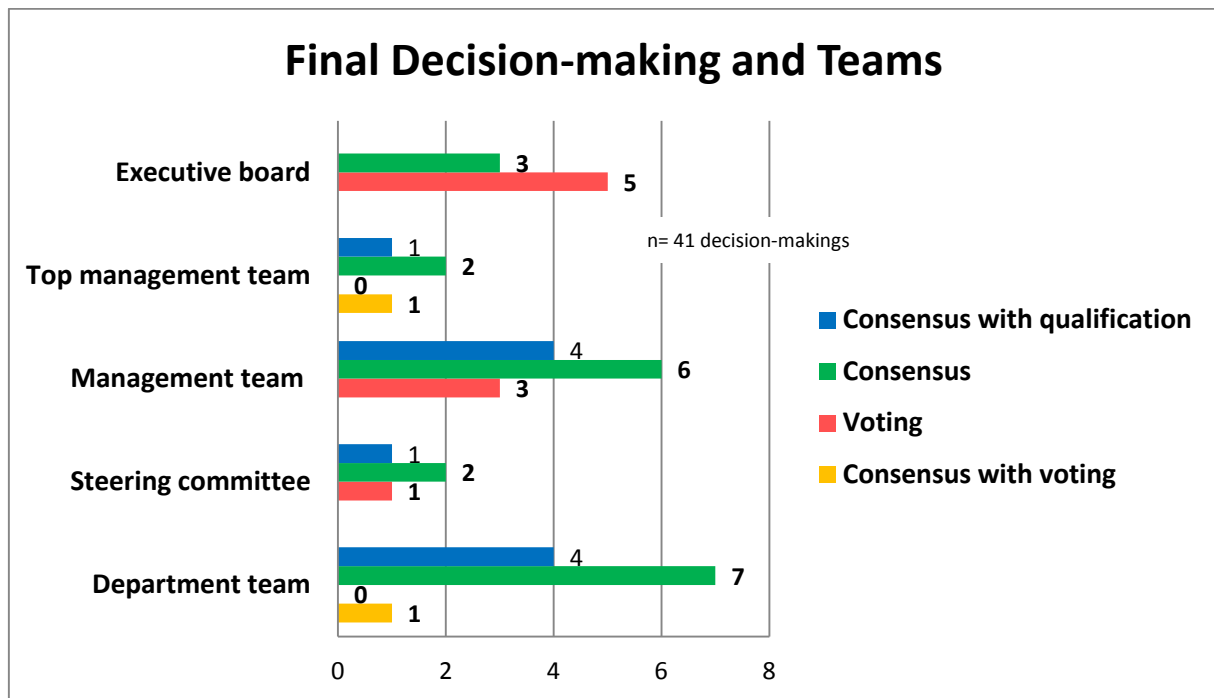


Figure 3.2-37: Decision-making Rule – Teams

How a certain decision was made (decision-making rule of group decision) by respective groups was not clearly defined *a priori* in many cases. However it was part of a managers' latitude in decision-making as interviewees indicated. Especially decision tasks with less consequences regarding merely one department or area, were linked to different decision-making styles of a manager. Once the manager made the decision on his/her own and in another occasion group decision-making was favoured for the regarded decision task. Hence each department may have its own decision-making procedures in final decision-making.

Interviews revealed that organisational culture has an impact on how managers interact with each other. Its derived "unwritten law" has not only an influence whether group decisions are taking place, but it also shapes group decision processes itself. Hence corporate culture influenced the interaction behaviour of group members during

joint problem solving. In particular interviewees conveyed the impression that the decision-making rule for final decision was highly dependent on “unwritten law” of corporate culture.

For instance one interviewee mentioned that the CEO supports consensual decision-making in teams. As a result most parts of the organisation implements that “unwritten law” in decision-making processes or leastwise pretends to do so.

“Mit dem neuen Vorstand der Anfang XXXX angetreten ist, ist das tendenziell ein bisschen in die andere Richtung gegangen. Es wird sehr stark auf Kommunikation gesetzt, das sehr stark auf Entscheidungen in der Gruppe gesetzt wird und da schon wie schon erwähnt, ganz stark auf konsensuale Entscheidungen mit allen Vor- und Nachteilen.“ (Interview 10)

Another informant pointed out that area specific culture exists. Divisions that are part of organisation for a very long time, seemed to less flexible and were sticking to hierarchical rules. Whereas new divisions established for new business opportunities had the tendency to be more flexible and team-oriented.

“Mein Bereich Sales ist ein sehr junges Team, seit XXXX gibt es uns, eigentlich erst seit XXXX in dieser Zusammensetzung, weil der Konzern vorher nicht im XXXX tätig war und wir haben sicher eine andere Entscheidungsstruktur als der Bereich Trading, diesen Bereich gibt es schon wesentlich länger, die eine viel starrere Entscheidungsstruktur haben als wir. Also im Konzern gibt es unterschiedlichste Entscheidungsstrukturen je nach Bereich bzw operativen Einheiten. Das hängt dann sehr wohl wieder von den Personen ab, die den Bereich leiten. Auch wenn es die starren Prozesse in einem Konzern gibt, kann man es immer so und so legen. Man kann als Geschäftsführer oder Leiter sagen, dass entscheide ich jetzt so alleine oder ich hole mir jetzt 150 Unterschriften. Das hängt dann im Detail immer von den Personen ab.“ (Interview 2)

g) Decision Power

As mentioned in Section 3.2.2 “Decision-making Group” the structure of different decision teams seems to be quite the same from the outside. There is always a person who is the leader of the group that guides this entity through the group decision process. For instance the department head and employees of his/her area, some appointed manager that leads a certain management team or the CEO as head of an executive board.

However the interviews revealed that the power structure in these teams is different in its formalism.

On the one hand power in decision-making of each agent and its subsequent decision-making rule may be predetermined by the organisational framework. Especially for decision groups that stand on the top of the hierarchy rules and guidelines were defined. Although existing power policies exist, the power distribution between group members

was driven by the expertise and experience of each agent for the observed decision task. For instance an executive board had to decide a decision task from human resource; in this case the agent with human resource background will unofficially have more weight in final decision-making.

On the other hand certain decision groups do not have predetermined rules for decision-making which is in particular true for teams that are located in lower hierarchy levels such as department teams. For these entities know-how, skill background and guidance of the group leader are the driving factors for the power distribution among group members for final decision-making.

Another determining factor for having decision power is hierarchy. When groups consist of members from different hierarchy levels, managers located higher in hierarchy have more weight during discussion and hence in final decision-making no matter which procedure is carried out (consensus, consensus with qualification, voting, etc.)

“Ja, weil die Regeln sind dann meistens abgesteckt, wenn die Gruppe sich nicht einig sind, dann gibt es hierarchische eine Person, die entscheiden muss und darf. Das wird in der Regel auch so hingenommen und akzeptiert.“ (Interview 16)

Interestingly one interview indicated that decision power distribution is a question of “personality” / “status” and not hierarchy: In other words features such as how is the person rooted in organisation and how long is she or he part of the company, have more weight in final decision-making than hierarchical aspects.

“Also wenn ich da ehrlich bin, das ist sehr oft eine Persönlichkeitsstrukturfrage auch. Also weniger eine Hierarchiefrage sondern in Realität wie die Person im Unternehmen verankert ist, wie sie auftritt. Da gibt es welche die länger da sind, die haben vielleicht mehr Gewicht auch wenn sie nicht leitende Position haben. Aber da gibt es andere die eine leitende Position haben, aber sich nicht durchsetzen können. Ich glaube das ist in jeder Gruppe aus meiner Erfahrung jetzt.“ (Interview 3)

Moreover the decision power distribution among group members is dependent upon the decision-making style of each leader and how the leader performs his/her decision power during joint problem solving (due to his/her position he/she has more power in final decision-making than other group members); whether he/she executes his/her theoretical more power in final decision-making or not.

All in all expertise, know-how and experience of group members were stated as most important factors that determine the weight of influence in final decision-making.

h) Personal Interests

It is important to emphasize that interviewees were trying to give a picture of a perfect organisation where hardly any interpersonal problems exist. When asking about personal interests in group decision-making hardly any interviewee gave me a clear answer. However most managers supported the following proposition "We are all acting in best interest of the organisation".

„Das Interesse des Unternehmens steht auf all Fälle im Vordergrund. Ich schließe aus das ein Vorstand irgendwelche persönlichen Interessen sonst hat.“ (Interview 5)

„(...) auch noch irgendwelche Fragen oder irgendein Gegenwind kommt, wobei ich dazusagen muss es geht nie in die Richtung, dass man den anderen aufs Glatteis führen will, sondern das sind dann üblicherweise berechnete Fragen.“ (Interview 6)

There are probably several reasons for that. Firstly informants avoided to speak "negatively" about their colleagues and the organisation. Secondly some informants did not assume that their colleagues would act in an unfair manner. Finally the described decision task and its final solution did not privilege one of the group member's. That was especially true for area specific decisions where no other departments participated in the whole decision process. Incidentally one could assume that there are more selfless and honest human beings in organisations than one would suppose.

Interestingly under certain circumstances some managers confirmed that personal interests arise and can influence group decision processes. Although all agents had similar organisational and strategic goals, especially agents that worked in different areas of an organisation had the tendency not to act in concert during joint problem solving. Interviewees justified that each head of division and his team followed their propositions that were important for his or her area of activity and that were essential for area specific goal achievement. Moreover conflicting interests between group members got more severe for certain decision tasks. As one informant clarified launching of a new product may be good for one division, but did not fit in the product portfolio of another division of the organisation. Hence groups composed of managers that work in different fields of functions in combination with delicate topics, induced each manager to follow his or her personal interest instead of finding the best solution for the entire company.

„(...)das prinzipiell in jedem Unternehmen einmal vorkommen kann mit unterschiedlichen **Bereichsinteressen**.“ (Interview 17)

Das ist ja etwas Immanentes, das in jedem **Budgetierungsprozess** zum Beispiel auch zu finden ist. Ja? Also hier auch das eingangs erwähnte Beispiel. Es ist ganz natürlich, dass das vor Ort die lokalen Gesellschaften daran interessiert sind sich einen genügend hohen Sicherheitspolster liquiditätsmäßig

zu sichern, weil die müssen ja auch dafür sorgen, dass die Liquidität ausreicht. Ja? (...) Auf der anderen Seite ist es natürlich in meinem Interesse hier möglichst die Liquidität knapp zu halten. Einerseits aus motivationstechnischen Gründen um halt hier nicht das Gefühl zu vermitteln, dass es egal ist wie viel ausgegeben wird zum einen. Zum anderen ja auch um die Profitabilität von der Gesellschaft sicherzustellen. Liquide Mittel auf irgendeinem jederzeit behebbaaren Konto sind halt totes Kapital. (Interview 17)

„Ich glaube der größte Unterschied ist der, dass wir in **HR ein recht homogenes Team** sind im Sinne wir sind alle HR und somit haben wir alle das **gleiche Ziel**, obwohl wir alle unterschiedliche Themen bearbeiten. Während im Vorstand, die **Vorstände in ihren unterschiedlichen Ressorts vertreten** und somit **auch unterschiedlichere Interessen haben**. Am Ende des Tages geht es allen darum, dass ... als Gesamtunternehmen unsere Ziele erreichen. Aber dennoch auf Vorstandsebene gibt es vielleicht unterschiedliche Wege wie diese Ziele erreicht werden können, und der eine Vorstand denkt vielleicht **der Schwerpunkt muss eher da gelegt werden, während der andere es eher in seinem Bereich sieht**. Also das ist für mich der größte Unterschied in meinem Team eher das Gefühl zu haben, dass alle an einem Strang in eine Richtung, während es im Vorstand so ist zwar alle in die gleich Richtung aber nicht immer am gleichen Strang, sondern **man versucht das Ziel von unterschiedlichen Seiten zu erreichen**.“ (Interview 10)

“Also definitiv. **Interessen für die eigenen Abteilungen**, logisch. Das ist eh ganz klar. Wobei aber gerade unsere Geschäftsführer und Vorstände eigentlich schon das große Ganze sehen. Sie sehen schon das Big-picture. Es gibt natürlich Interessen und es gibt gewisse Punkte, (...)“ (Interview 15)

Some managers reported that in case of personal interest had arisen during discussion, the group leader intervened and made final decision.

„Weil es auch in Teams teilweise unterschiedliche Interessen gibt. Sobald **persönliche Interessen der einzelnen Teammitglieder so sehr divergieren**, dass einer sagt ich kann da aber nicht mit, versucht das vielleicht dann noch einmal zu modellieren und mehr zu einem Kompromiss zu kommen, da bin ich schon dann einmal dass ich sage, das ist jetzt die Entscheidung und ich glaube, dass es insgesamt für das Unternehmen oder unser Team so am besten ist.“ (Interview 10)

Furthermore interviewees revealed that organisations develop tactics to limit selfish behaviour of group members during decision-making. Firstly fostering team spirit in joint problem solving were predetermined and derived from general business strategy. Secondly area specific objectives were linked with each other to limit bargaining attitudes and activities between group members and to stimulate effective information exchange between agents. Finally managers mentioned that transparency is important to be part of group norms and that objectives coincide. Thus rather corporate strategy will be followed, than personal goals during group decision-making as shown in figure 3.2-38 below.

“Deshalb machen wir auch da und dort, dass wir Ziele verschränken. Zum Beispiel Produktentwicklung und Verkauf. Das sagen wir bewusst der Verkäufer bekommt Ziele von der Produktentwicklung und umgekehrt geben wir auch den Produktmanagern, dann Verkaufsziele. Okay ihr habt zwar den Entwicklungsbereich, aber ihr könnt auch mit verschiedenen Maßnahmen den Verkäufer unterstützen, dass er das technisch richtige dabei hat, wenn er zum Kunden geht. Das machen wir auch Ziele verschränken. Somit wird ein gegeneinander arbeiten verhindert. Deshalb machen wir auch da und dort, dass wir Ziele verschränken. Zum Beispiel Produktentwicklung und Verkauf. Das sagen wir bewusst der Verkäufer bekommt Ziele von der Produktentwicklung und muss diese auch platzieren bei den Kunden, die er hat und umgekehrt geben wir auch den Produktmanagern, dann Verkaufsziele. Okay ihr habt zwar den Entwicklungsbereich, aber ihr könnt auch mit verschiedenen Maßnahmen den Verkäufer unterstützen, dass er das technisch richtige dabei hat, wenn er zum Kunden geht. Das machen wir auch Ziele verschränken. Somit wird ein gegeneinander arbeiten verhindert. Wie kann jeder dazu beitragen, und sich

quasi mit einer unsichtbaren Hand kurzschließen und gemeinsam arbeiten. Okay ich kann es nicht direkt beeinflussen, aber ich kann den anderen unterstützen, wenn der die richtigen Informationen hat, wenn er dort hingeht. Der Informationsfluss ist sehr konstruktiv. Die Ziele sind auch für den anderen transparent gemacht. Okay wir haben gemeinsam dieses oder jenes Ziel. (...) Die Ziele sind auch für den anderen transparent gemacht. Okay wir haben gemeinsam dieses oder jenes Ziel." (Interview 7)

„Auf Unternehmenszielebene entwickeln wir gerade Gruppenziele, wo dann alle drei Bereichsleiter zum Beispiel für dasselbe Ziel verantwortlich sind und gemeinsam an einem Strang ziehen. Auf Mitarbeiter-ebene sind das individuelle Ziele. Wobei, das stimmt nicht auch ein Teamleiter bekommt ein Ziel für das Gesamtteam und verteilt dann Aufgaben in seinem Team. Die Zielvorgaben sind nie auf eine Einzelperson beschränkt sondern auf den Gesamtaufgabenbereich.“ (Interview 16)

„Ich kann Ihnen ein Beispiel geben, jeder Mitarbeiter hat auch ein Teamziel, ein Gruppenziel und wo das Feedback, die Bewertung vom Kunden kommt. Wir holen sozusagen ein Feedback vom Kunden ein, wie wurde dieses Teamziel umgesetzt, das ist damit eine relativ objektivierbares Feedback einer Gruppenentscheidung. Das hat jeder Mitarbeiter. Ansonsten ist es geht es rein um individuelle Zielerreichung.“ „Nein, die sind völlig unabhängig. Es hat jeder von den Mitarbeitern 5-7 Einzelziele und ein Teamziel, ein Gruppenziel, wobei Einzelziele sich nicht im Wege stehen mit dem Gruppenziel.“ (Interview 3)



Figure 3.2-38: Personal Interest vs. Corporate Strategy

Interestingly one manager stated that possession of information implies power. Put it differently important information may be withheld by certain group members and not be shared in order to have a superior position during decision-making.

“Wenn es ein Thema wäre, wo Information Macht ist, wo man versucht möglichst wenig herzugeben, aber ich würde nicht sagen, dass das bei uns der Fall ist.“ (Interview 7)

Although the informant negated that this strategy would be used in his company, it could still be part of joint problem solving due to the fact that it was at least mentioned. Further investigations of this aspect would be necessary to clarify this issue.

For instance when a manager wants to get his project approved and to be preferred over other ones, he or she may withhold some information that are not beneficial to get the final approval for his or her project. Hence during multilevel decision-making processes important information may get lost due to personal interests of selfish managers. (Interview 17+ Martin 2010)

„Ich kann die Entscheidung beeinflussen indem ich im Vorfeld, wie ich da die Gespräche führe, wie ich das ganze aufbereite, welche Argumente ich habe. In dem Sinne habe ich keine Stimme.“ (Interview 10)

„Die Leute, die im Holding-Vorstand sitzen, bekommen stets vorgefilterte Informationen, die die Entscheidungsfindung des Vorstand maßgeblich beeinflussen. Die Meinungsfindung findet bei jedem Mitglied natürlich auch einzeln statt. Zusätzlich bei manchen Themen haben die Team-Mitglieder eigene Interessen. Die ABC-Land 1 möchte vielleicht etwas anderes als die ABC-Österreich, weil es bei Ihnen besser passt, weil es für Sie in Ihr Konzept passt, in Österreich vielleicht hierfür keine Abnehmer gibt. Also da ist natürlich immer die Frage, wie bringe ich das zusammen. Die einzige Möglichkeit, die ich habe ist das transparent wie möglich mache.“ (Interview 20)

„Na ja es ist ja so, im Antrag ist ja bereits eine Abwägung von verschiedenen Möglichkeiten enthalten. Ja? Und die ganze Aufbereitung, die Analyse. Also in Wahrheit der Diskussionsprozess passiert ja vielfach schon vorher. Also der Antrag ist so ausgestaltet, dass eigentlich der Vorstand im Regelfall ein klares ja oder nein dazu sagen kann. Insofern ist das in den Fällen einfach. Es kommt natürlich auch vor, dass gewisse Aspekte, die der Vorstand wissen möchte, noch nicht ganz klar abgehandelt sind. Da gibt es noch mal Rückfragen und dann wird quasi die Entscheidung noch mal vertagt.“ (Interview 17)

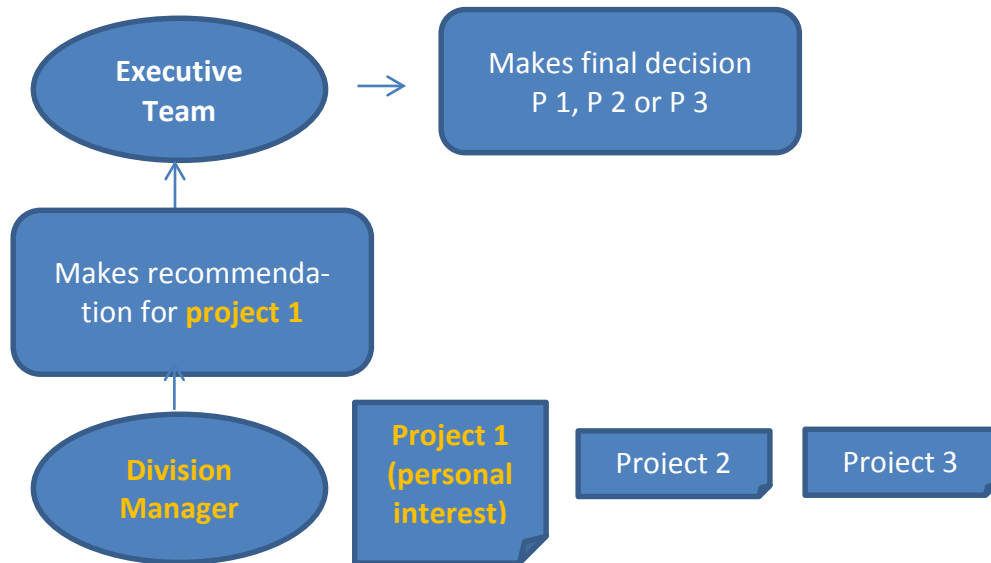


Figure 3.2-39: Personal Interest – Multi-level decision-making

i) Overview – Decision Examples

For some cases it is possible to reproduce the group decision process embedded in the organisational context. The following table shows the courses of activities and the responsibilities of managers during certain decision-making processes. For four high-impact decisions and five middle-impact decisions it was possible to illustrate the particular steps until final approval of the group decision. In these instances the informants pointed out that several hierarchy layers were involved in decision-making process. This exemplified structure of multi-level group process was not only present in the illustrated nine instances, but was also reported by several other informants. Certain groups prepare, discuss and make preliminary decisions and pass their recommendations to another team in the hierarchy layer that makes final decision.

In this process the employees and members of certain management teams could have the subsequent roles in a decision process:

i... inform: information is collected and screened by employees or managers

a... analyse: analysis are performed on the basis of information provided

R... Recommendation: certain group and its leader make preselection of alternatives or find one final solution (=make preliminary decision) and passes their proposal/preliminary decision to the responsible superior authority. The outcome of a recommendation is the result of a group decision. Assigned team leader passes result to superior management team. (Vorstands Antrag, Empfehlung)

D... Decision: Recommendation/Preselection of group will be presented by assigned group leader in a higher management team meeting or could be handed to only one superior manager. In one case the management team makes a group decision whether recommendation is followed or not. In the other case one manager decides if the recommendation is satisfying.

FA... Final Approval: Decision gets officially approved and recorded in writing by certain supervisor or supervising group that could exhibit its veto power.

Of course these activities were overlapping between involved individuals and teams in a certain decision process and information processes were not always fully replicable. Nevertheless each employee, manager and its teams had different duties and focuses. Some were responsible for information collection and analysis and did not have authority to participate in decision-making. Others were responsible for evaluating alternatives and making a final decision.

This structure will be illustrated on the basis of the following six examples that were described by interviewees (three high-impact and three middle-impact decisions):

A) High-Impact decision:

Market expansion (2): finding new investment opportunity

- 1) Certain members of management teams gathered information and data **(i)**
- 2) On basis of provided information executive board members made analysis and developed proposal of two alternatives, investing in Hungary or Romania with recommendation for Hungary **(a) and (R)**
- 3) Final decision-making of executive board with CEO **(D)**
- 4) Decision needed final approval of supervising entity, "Aufsichtsrat" **(FA)**

Investment (3): extra budget for reinvesting in projects

- 1) Department teams reported requested information from division heads **(i)**
- 2) Division heads developed new ideas, made calculations and evaluations of alternatives and develop final short list of two to five options **(a) and (R)**
- 3) Presented shortlist top management team
- 4) Top management team made final decision and director has veto power **(D)** and **(FA)**

Strategy (4): strategic guidelines for subordinated managers

- 1) Information collection from certain subareas **(i)**
- 2) Division heads made together preliminary decision **(a)** and **(R)**
- 3) Presented their proposal in top management team
- 4) Top management team made final decision together with division heads and director had veto power **(D)** and **(FA)**

B) Middle-Impact decision:

Financial decision (1): development of new operating numbers

- 1) Information was collected in branches by employees, key points were extracted **(i)**
- 2) Group of branch managers developed five to fifteen operating numbers as a group (Recommendation) that are in their opinion relevant for supervising operating business **(a)** and **(R)**
- 3) Recommendation passed to superior management team
- 4) Certain management team made final decision and chooses five relevant operating numbers **(D)**
- 5) Final approval by top management team **(FA)**

Marketing&Sales (3): product development

- 1) Department teams collected data about market expectations and trend of prices etc.; make estimations about production costs and manufacturing duration for regarded product **(i)**
- 2) Management team analysed information and calculated scenarios and made recommendation **(a)**
- 3) Passed recommendation to top management team
- 4) Top management team made final decision and official approval **(D)** and **(FA)**

Human Resource (4): decision team development initiative

- 1) Head of departments reported status quo of their employee resources **(i)**
- 2) Group of Vice Presidents analysed, discussed and preselected new ideas **(a)** **(R)**

- 3) Discussed their proposals with executive board that was in charge and made together final decision **(D) (FA)**

Role of management group
i= inform
a= analyze
R= recommendation
D= decision
FA= final approv. (veto)

Level of Management

high

Table 3.2-9: Examples – High-Impact decision

High-Impact decision	Department team	Management team	Executive team/ top management team	Supervising entity “Aufsichtsrat”
Market expansion (1)	i	a, R	D	FA
Market expansion (2)		i, a, R	D	FA
Investment (3)	i	a, R	D, FA by director	
Strategy (4)	i	a, R, D	D, FA by director	
Acquisition (5)	i	a, R	D	FA

Table 3.2-10: Examples – Low-Impact decision

Low-Impact decision	Employee/teams	Department team	Management team	Executive team/ top management team
Financial decision (1)	i	a, R	D	FA
Financial decision (2)	i	a, R	D	FA
Marketing&Sales (3)		i	a, R	D, FA
Human Resource (4)		i	a, R	D, FA
Marketing&Sales (5)	i	a, R	Not involved	D, FA by director

3.2.4 Manager's Reasons for Group Decision-making

Little is known about the attitudes and motivations of managers for group decision-making in real organisations. As we know manager's motivation for group decision-making has only its bearing of application when they are not obliged to use a certain group for decision-making. Beyond that they possess an opinion about group decision-making and mention their benefits. Figure 3.2-40 gives an overview of some manager's attitude towards group decision-making.

The next graph illustrates why managers chose group decision-making for finding the "correct" solution for a regarded decision task. The informants reported the subsequent reasons to favour groups for problem solving whereas multiple mentions are present. The chart is divided into three main parts. The reasons for using groups for decision-making were clustered as follows, prior to/during /and after decision-making. Prior to decision-making external preconditions occurred that entailed group decision-making. Beyond that group decision-making led to several process improvements that occurred during that group process. Finally some positive effects were visible after the group decision.

Let us examine the first category, prior to decision-making. According to the diagram inter-divisional and complex decisions as well as the decision-making style of the manager was mentioned between eight and twelve times from the informants. It seems that these factors had huge impact whether group decision-making was performed. Incidentally organisational structure and culture were possible preconditions for group problem solving.

The next part deals with process improvements. Know-how exploitation, getting new perspectives and boosted information exchange were positive implications during group decision-making and were noted between six and eight times.

Finally regarding the outcome of group problem solving, the diagram highlights that better decision acceptance, implementation and decision quality were decisive benefits of group decision-making that motivated leaders to perform group problem solving. They stated that decision quality is improved and all members that participated in decision-making were more satisfied with the solution. Likewise the understanding for the decision was enhanced. These factors were cited between six and thirteen times. Furthermore team building, organisational learning and motivation of employees were indicated as positive side effects of group decision-making.

From the figure it is apparent that manager's motivations for group problem solving are manifold. Whereas decision-making style of manager, the information need for complex and inter-divisional decisions and the acceptance need are the driving forces regarding group decision-making.

Three motives that were very striking are not included in the diagram but were mentioned two to five times. First some of the informants stated that they use group decision-making in order to share one's responsibility for a certain decision. Secondly other interviewees responded that risk hedging is their reason for group problem solving, because they did not want to be sole to blame if things go wrong. Meaning that all risks of a very complex decision task are covered with many opinions and everyone is aware of them. Thirdly some leading managers had already his/her solution for the regarded decision task in mind and then the leader tried to sell his/her suggestion to his team. Thereby he/she attempted to guide the group in the direction of his/her favored alternative. Hence the group may think it was democratic group decision, although the process was "manipulated" by the group leader. Hence it can be seen as an indirect autocratic decision of the group leader with the advantage of having full commitment of the group for final decision.

"In dieser Hinsicht provoziert man auch Gruppenentscheidungen in diese Richtungen. Also mir ist es auch manchmal lieber, wenn ich weiß ich muss eine Entscheidung treffen, wo ich mir nicht sicher bin, dass alle mitziehen. Wo ich aber der Überzeugung bin, dass wenn sie nicht mitziehen, wird es kein Erfolg. Dann gehe ich lieber in die Gruppenentscheidung. (...) Die Gefahr ist genau das was wir schon beschrieben haben. Wenn man eine Entscheidung für sich im Kopf schon gefällt hat und wenn man davon nicht mehr abweichen will. Wenn man dann reingeht in eine Gruppendiskussion und wenn man dann diese Entscheidung dann so trifft wie man sie sich vorgenommen hat unabhängig davon was in der Gruppe herausgekommen ist, das ist gefährlich." (Interview 8)

Besides these reported reasons from the informants, the following condition and its resulting dynamics make group decision-making an inevitability tool for organisations.

The analysis of the interviews showed that decision-making under circumstances with distributed knowledge was part of daily business and therefore makes joint problem solving a necessity for an organisation.



Figure 3.2-40: Reasons for Group Decision-making

Reasons against Group Decision-making

The subsequent diagram shows reasons why managers were not using group decision-making, but multiple mentions were present.

When interviewees were asked under which circumstances they would not prefer group decision-making over individual problem solving very similar reasons were stated. Generally not every decision task in the regarded organisations demanded cost-intensive and laborious group decision-making - or instance in routine decisions for which a single person holds all information that is necessary to make a suitable decision. Moreover external contingencies faced by decision-making groups such as time pressure and conflicting goals had a negative impact on the development and effectiveness of group decision-making. Hence under these conditions individual decision-making is favored.

The categorization is the same as in the previous graph "Reasons for group decision-making" and is examined above. Only one negative effect was mentioned that got vis-

ible after the decision-making, namely decision quality. In three cases informants referred that with group decision-making finding the best solution for the company was not possible. Due to the fact that too many compromises had to be made to reach final agreement in the group and the best solution for the organisation will not be selected.

Regarding process impairment the following harmful influences were noted. Some interviewees were overwhelmed by the complexity of group decision processes. For instance to make sure that organisation of the meetings will be secured and managers were worried about the guaranteed attendance of all required group members for final decision-making.

Another crucial factor reported was the potential occurrence of personal interests that could influence the decision-making in a negative way: When group members were keenly driven by personal interests in finding the best solution for the organisation or when interests in the group were diametrically opposed and decision-making is blocked.

Several external preconditions were stated that in these cases managers do not favour group decision-making. Most frequently informants indicated that time is a rare resource and group decision-making demands more time or some decisions itself require very fast decision-making. When the manager is pressed for time in finding a solution for a regard decision task joint problem solving is not executed although it could lead to a better decision than deciding on its own. Valuable business opportunities could be missed due to a longer group decision process. An additional resource for joint problem solving were appropriate group members. Managers indicated that the level of maturity of the group is not sufficient for certain decision-making tasks. For instance team members have not adequate experience or the team as a whole does not have the accurate seniority. Moreover emotional reasons between group members can make it impossible to reach final agreement as a group.

From the diagram 3.2-41 it is apparent that decision task besides time factor is the most mentioned incident that managers prefer individual decision-making over using a group for finding final solution. Especially tasks that had negative consequences for employees were decided by the leader alone behind closed doors. For instance individual decision-making was preferred for delicate budget decisions or dismissals of certain employees. Finally decision-making style of managers and corporate culture were reported as limiting reasons for using group decision-making.

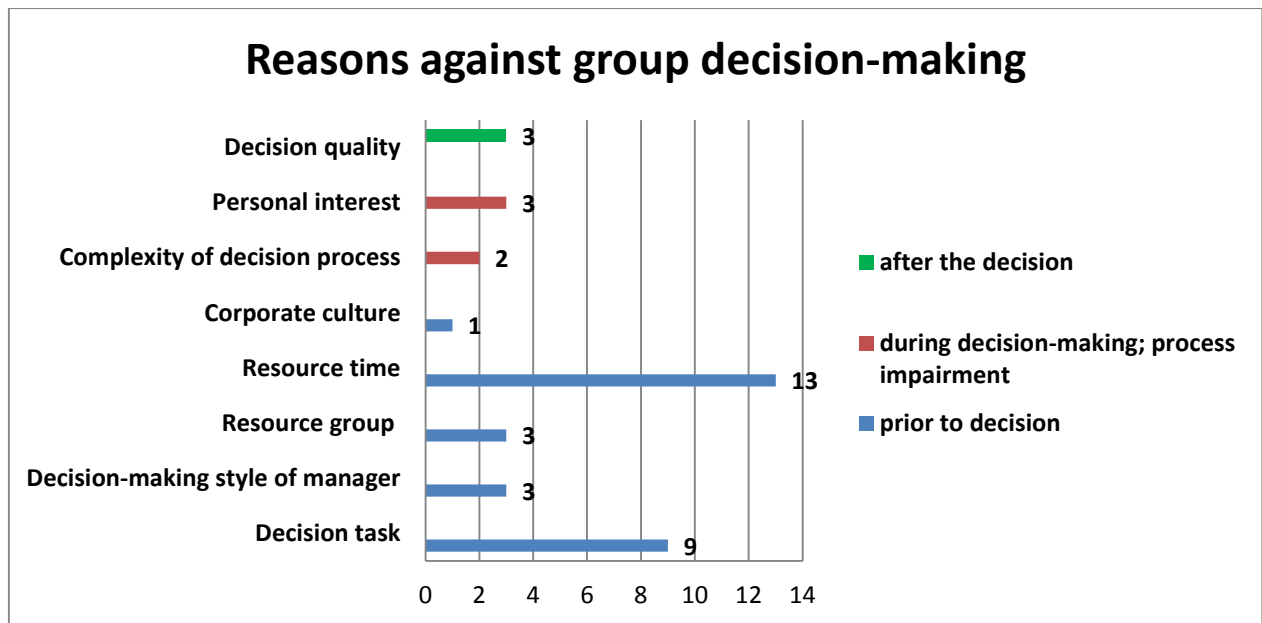


Figure 3.2-41: Reasons against Group Decision-making

4 Resume

The aim of this thesis is to analyse group decision-making in organisations. Due to the lack of information in the relevant literature on this topic, appropriate case studies were selected and screened with regards to group decision-making. In addition, twenty-five semi-structured interviews were conducted with executive members of organizations from various industries in Vienna.

A stimulating factor in an organisation's business, whether group decisions are part or not, lies in the scope of the organisational design from the top management level (CEO etc.) in such factors as corporate culture, design of firm, structure of firm, delegation mechanism of decisions, information and communication channels and mechanisms etc. Apart from these points, my investigation in organisations shows that managers' leadership style has a major impact when group decisions are performed.

Interviews demonstrated that executive members were using their power to influence business decisions. They chose between different decision processes (group/individual) and several final decision-making procedures (consensus/voting etc.). A manager's decision-making opportunities are illustrated in figure 4-42.

This figure exhibits the important role of managers in organisations. It is their duty to arrive at the best decisions for the company which account for the wider decision-making context, i.e. environmental, organisational and managerial factors. In that process, managers have the power to guide decision processes and to choose the required parameters for decision-making (selection of subordinates or other managers, final decision-making procedure, etc.). For a balanced decision-making process, these leaders have the choice of when and how individuals or groups (own department, different department) play a part in the whole judgement call and have the power to participate in the final decision.

After scanning and analysing all these input factors (decision task, decision context, human resources) (on the vertical axis in the graph), the manager enacts one of the four decision processes (in blue boxes connected with a blue and dashed red lines with manager's blue round box). The next parameters are the process variables (on the horizontal axis in the graph). Once he has chosen one of the decision processes, the necessary mechanism (information search, meeting culture, and communication) for reaching goal-oriented decision-making will start for the specific decision task.

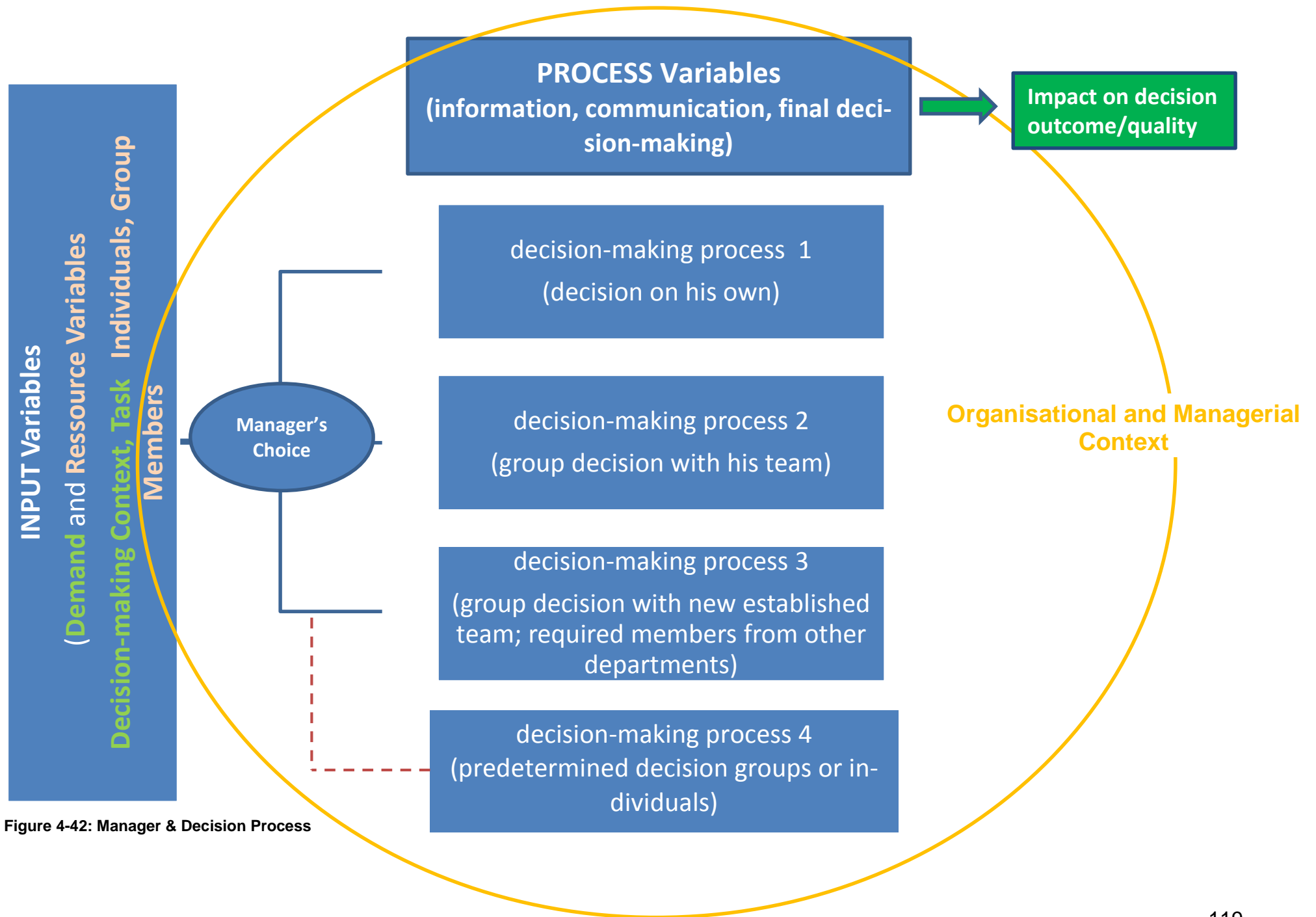


Figure 4-42: Manager & Decision Process

On balance, that interplay between the input and process variable described determine and ultimately impact the final outcome of the group decision.

Basically, there are four decision processes that are executed by managers which indicate a manager's freedom of action in decision-making in this context. As shown in the figure, the manager's power in decision-making is limited in one case. That fourth decision process is marked with a red-dashed line in the picture. Namely, there exist predetermined rules for decision-making process and decision-making authority derived from the decision-making context (managerial context, organizational structure). For instance, certain committees of the organisation are responsible for making decisions linked to a specific topic or management teams scheduled such as "Geschäftsführung GmbH, Vorstand AG," who is responsible for making the final rulings on matters. Whereas other steps in decision-making such as recommendations from subordinated teams can be part of that predetermined final decision group. Members of committees can also be participants in other management teams and their roles are overlapping. In one scenario, they are provided with decision-making authority for solving problem sets as a group consistently for the same set of decision tasks. In the other scenario, management teams are confronted with different decision tasks each time and their decision-making authority varies respectively depending on the topic.

In addition to the circumstances from within the scope of the decision-making context, the managerial setting such as definite organisational rules and norms bring about process four, where the manager has the freedom of action as to how he/she will get to the final solution.

For reaching the final agreement, managers prefer to follow consensual decision-making seeking total unanimity, neglecting voting procedures. Due to the fact that voting rights are defined *a priori* for executive boards, voting schemes are executed to a higher extent in these entities than in other management teams. However interviews showed that executive board members did not necessarily use formal voting procedures for each and every decision task.

In the case of other management groups, the process of how certain decisions have to be made, are not clearly defined in advance. Hence, in most cases discussion will be for held as long as all group members are on board – showing total commitment for final group decision. Consensual decision-making serves to strengthen a group leader's position, when all group members support the final decision. In the event of

not reaching commitment as a group for the given decision task, group members would not back the leading manager. That could be one reason why managers prefer to reach total consensus in decisions and do not execute voting schemes.

In cases of disagreement, “consensus with qualification” or “voting with qualification” is carried out where the group leader or a higher instance of the organisation makes the final decision.

As interviews indicated, organisational culture is another driving force regarding interactive behaviour between group members, and therefore influences the final decision-making procedure. Managers reported that this “unwritten law” and its derived habits and decision-making procedures can vary widely between different departments in an organisation. One department may be more team-oriented and support collective decision-making, while another one follows autocratic management style with emphasis on individual decision-making. This finding also occurs in a study of Edmondson (1996, cited in Duhigg, 2016), comparing team interaction behaviour of an orthopaedic in a cardiac ward.

Table 4-11 shows the likeliness of group decision-making and the latitude of a manager in decision-making influenced by corporate culture. Apart from the executive board, explicit decision rules are not established. Hence the decision-making rule is the result of best practice and ultimately the manager’s choice for given decision task.

Table 4-11: Decision-making Rule – Decision-making Style of Manager

	Decision-making style of Manager	Intra-departmental	Cross-departmental	Decision-making rule
Department A	Autocratic	Individual decision	Group decision	Manager’s judgement & Best practice
Department B	Team focus	Group decision	Group decision	Manager’s judgement & Best practice

Corporate culture shapes interaction during decision-making process

As stated above, in some cases the manager has the opportunity to choose one of the three decision processes (figure 4-42, blue boxes are linked to managers choice box with a blue line).

The reasons for a manager to choose groups for decision-making are manifold. Group decisions are a necessity for complex and inter-departmental decisions. Managers seek to gather distributed knowledge, take advantage of know-how and new perspectives of his/her employees in order to make appropriate decisions. The goal is to enhance and to boost the exchange of information among group employees with different information sets and know-how to encourage motivation creativity, innovation and organisational learning. Group decision-making is an appropriate instrument for the improvement of these underlying processes, resulting in high quality decision-making. Decisive benefits of group decision-making lie in unmistakable better decision implementation, full commitment of the group and quality of decision. These results are consistent with Vroom and Yetton's (1972) findings that decision acceptance, implementation and quality are important factors so that group decision-making is preferred by managers over individual decision-making. The major reasons against group decision-making are time constraints and the conflicts induced by the various decision-makers.

Furthermore, the organisational structure, which is also part of the decision-making context, has a significant impact on group the decision-making process, especially on the information exchange procedure for specific decision tasks. The analysis of the interviews made clear that organisational structures shape the information exchange manner on the part of group members that make the final choice for a certain decision task. Decision examples revealed that several hierarchical layers have to be passed until final solutions for a given decision task can be reached. Whereas in the meantime, several analyses, preselection and recommendations are submitted by subordinates. Consequently, information is lost until the final decision will be made. It would be worth investigating this information transition in detail.

The level of information prior to group members' decision-making is a black box and there seems to exist a huge information gap between group members. Due to the interviews, the decision task guides information collection behaviour of each group member, correspondingly resulting in different information sets on the part of participants. For different decision tasks, information channels are fixed (jour fix, face-to-face, telephone, mail, video-, telephone conferencing, etc.) but information collection and exchange activities vary respectively. The number of formal and informal meetings varies between one to five meetings and is dependent mainly on the factors of deadline

and the decision task complexity. When alternatives were considered, three options were presented and discussed most of the time.

With regard to group characteristics, various decision groups consist on average of six people, ranging from three to fourteen decision-makers. Decision groups located in the high position tend to be smaller in size with a maximum size of seven group members (case studies eight). Every team has a group leader whose role is to supervise and monitor the group process. In addition, he/she is responsible for the administrative side of activities, in terms of meetings and delegates information activities. Generally, he/she has the power to manipulate, to stimulate and to coordinate partaking of and discussing among group members. In addition, communication behaviour between group members is influenced by corporate culture and personality characteristics of decision-makers. "Sensitive" decision tasks may lead to a more emotional and intense discussion. Basically intra-departmental groups with similar functional backgrounds tend to have high group cohesiveness, willingness to cooperate and share strong team spirit and solidarity. Hence, fast decision-making is possible. In contrast, group members of inter-departmental groups with different functional backgrounds, may be driven by personal interests. Due to a lower willingness to compromise, longer discussions take place until final consensus is reached. Interviews indicated that communication behaviour and group cohesiveness of executive boards and top management teams of different organisations vary respectively – from negotiation focus to camaraderie. In the case of these teams, no regularities were identified.

The driving force for the distribution of decision-making authority between group members is expertise, knowledge and experience of every group member regardless of whether *a priori* decision-making authority policies are defined. Depending on group members' information sets and its derived arguments, decision-makers have more or less weight in final decision-making. Furthermore, distribution of decision-making authority is dependent on the decision-making style of each leader and how he/she enacts decisions during collective decision-making. Due to his/her higher position, the leader has more power in final decision-making than other group members. The leader has the possibility of executing his/her theoretical upper hand in final decision-making or not. Finally, informal decision-makers may have more power in decision-making due to their status in the organisation where hierarchical factors are neglected.

Personal interests of group members hinder effective group decision-making. Interviews indicated that especially groups composed of decision makers that work in

different fields of functions (e.g. group of different division heads) in combination with a delicate topic, may induce an executive member to follow his/her personal interests and goals that are important for his/her field of function instead of supporting the best solution for the entire organisation. Against this background, effective group decision-making is limited. In order to get objective and qualitative decisions, joint problem-solving with group members that might have personal interests in mind should not have decision-making authority on this delicate topic. Instead, it would be more beneficial to shift this issue up the totem pole where objective thinking is more likely to play a role in making final decisions. This could be an individual person or another team of professionals. Interviewees reported that in order to counteract selfish behaviour, manager-area specific objectives are linked with each other and coincide. Additionally, corporate culture has to foster team spirit and team work. Thus, effective information exchange between agents will be reached, which is essential for making appropriate decisions. It seems to be essential to develop certain group norms leading to “psychological safety” as suggested by Duhigg (2016). Otherwise, group members may withhold essential information in order to retain the superior position during collective decision-making.

As literature and case studies have shown, group decision-making processes are very complex due to the interplay of certain parameters such as, task characteristic, group size and structure, organisational context etc. During the interviews, an attempt was made to get relevant information about all these determinants in order to illustrate the whole group decision process from its inception to its final decision-making sequence. Some informants were able to report most of the steps until final decision was reached, while other informants were not capable of replicating the whole group decision process in detail and therefore some required steps until final agreement as a group are missing. It is important to say that group decision processes are quite similar and are not very different on the surface. Separated and overlapping steps required for final decision-making can be more formalized in detail or are best practice, whereas the whole decision cycle merely manifests in small differences. There is the tendency that the group decision process is more formal in at the top of the hierarchy. Furthermore, the decision task itself may trigger a sequence of activities until the group makes the final decision collectively and its required analysis, meetings etc. are not planned in advance.

Referring to Duhigg (2016) possibly in the short-run, individual decision-making may be beneficial, but in the long-run, group intelligence will outperform a single leader when psychological safety is reached in decision groups and leading managers are able to balance the personal interests of decision-makers with coordinated objectives derived from corporate strategy.

This study has a number of limitations. One limitation of the current research is that the sample consists only of large organisations located in Vienna. In my point of view, it is representative of Austria, because most large cooperations and their headquarters are located in the capital of Austria. As a result, the only weakness regarding the sample persists in the representativeness of organisations in the rest of Europe.

Another point to mention is that the firms examined had differences in their owner structure, some were publicly and some privately owned. Most organisations were Austrian companies with their headquarters in Vienna, whereas some companies were subsidiaries with their parent company located in other countries in Europe (Germany, Netherlands).

Regarding the organisational structure, most organisations had several hierarchy levels which induced a multi-layer decision process. Group decisions were made at various hierarchical layers regardless of whether the hierarchical level was steep or flat for the respective companies. Most important decisions were made in the top executive teams, but preliminary group decisions were part of that top-down decision process.

These initial recommendations were made beforehand by a certain management group or an individual manager, subsequently presented in a superordinate executive team. Hence, the final group decision may be influenced by an invisible hand that does not inhibit decision-making authority during final judgment calls.

The main weakness of the study is that informants were not able to replicate each parameter of group decision-making (from information search to final solution) in detail. Due to the fact that interviewees were only describing decision-making processes and his/her course of activities in this progression, they did not participate in every meeting of different groups during a multi-layer decision process.

In other words, interviewees were taking part in preliminary decision-making and made recommendations for higher decision-making groups such as the executive board. In

some cases, they were invited to these meetings and presented his/her issue and subsequent recommendation. In other cases, they did not gain any insight into these meetings.

Hence, although some steps towards final decision-making were explained in a somewhat fragment manner, it was possible to obtain a comprehensive view of how different decision settings work.

Some doubts may be raised as to whether different groups of different types of departments and hierarchical layers solving various decision tasks constitute a meaningful scope of investigation. These inconsistencies' plurality may make precise conclusions difficult, but they may serve as the basis for further research in this field. As the analysis showed, similarities between several decisions settings were predetermined in real firms. Hence this diversity can be seen as a strength of this study.

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List of Interviewees

	Informant	Industry
Interview 1	Department Head	Professional, scientific and technical activities
Interview 2	Department Head	Electricity and Gas Supply
Interview 3	Department Head	Financial and Insurance Activities
Interview 4	Department Head	Wholesale and Retail Trade
Interview 5	Assistant of executive board member	Financial and Insurance Activities
Interview 6	Head of Division	Manufacturing
Interview 7	Vice President	Manufacturing
Interview 8	Head of Division	Financial and Insurance Activities
Interview 9	Assistant Manager of Head of Division	Financial and Insurance Activities
Interview 10	Head of Division	Financial and Insurance Activities
Interview 11	Director of Company	Professional, scientific and technical activities
Interview 12	Director of Company	Manufacturing
Interview 13	Director of Company	Wholesale and Retail Trade
Interview 14	Assistant Manager of Division Manager	Wholesale and Retail Trade
Interview 15	Assistant of Executive Board Member	Manufacturing
Interview 16	Head of Division	Information and Communication
Interview 17	Assistant Manager of Head of Division	Financial and Insurance Activities
Interview 18	Department Head	Information and Communication
Interview 19	Department Head	Wholesale and Retail Trade
Interview 20	Department Head	Financial and Insurance Activities

Interview 21	Department Head	Information and Communication
Interview 22	Director of Company	Professional, scientific and technical activities
Interview 23	Department Head	Construction
Interview 24	Assistant Manager of Department Head	Construction
Interview 25	Assistant Manager of Department Head	Information and Communication

Interview Guideline (shortened)

Topic	Question
Group Decision	<ul style="list-style-type: none"> For which topics do you use group decision-making? For which other reasons do you delegate decision-making authority to a group?
Group Composition # agents, background of members, hierarchy level who selects them	<ul style="list-style-type: none"> Would you please describe the group composition? How many members have the group? Which positions do they have in the company
Group Decision Process # meetings until final decision # alternatives communication	<ul style="list-style-type: none"> Would you please describe a group-decision process until you make final decision together for certain decision task? How many meetings are carried out until final decision is made? How a meeting does looks like? How many alternatives are regarded? How would you describe the communication behavior of each group member during the meetings?
Information Who gathers information How info exchanged	<ul style="list-style-type: none"> Could you please describe the information process for regarded decision task? Who is involved and how is information collected? How is information exchanged between group members?
Final Decision-making Procedures, decision power variance of authority, reporting, authorization of group decision	<ul style="list-style-type: none"> Which group members make the final decision? How do they reach final agreement? How is decision power distributed among group members? Does the group adopt the same group decision-making procedure each time? Does the GD have to be approved at a higher hierarchy level? To whom does the group report its results?
Personal Interests	<ul style="list-style-type: none"> Do you think personal interests of group members influence them in final decision-making?
Outcome	<ul style="list-style-type: none"> What is the predominant benefit of the final group decision? Why would you not use group decision-making?

Abstract

The purpose of this Master thesis is to investigate real life data of group decision-making in organisations in order to get a comprehensive understanding of how and why group decision-making is part of daily business in almost every company.

By means of desk research, four major constructs of group decision-making (decision task, group characteristics, decision process, outcome) were identified and elaborately depicted. To this end, relevant case studies concerning the aforementioned aspects of group decision-making in organisations were selected. Based on the insights gained from the desk research and case studies, the questionnaire for the empirical field study was developed. Twenty five semi-structured interviews were conducted with executives from organisations from various industries in Vienna.

The results indicate that group decision-making occurs in different organisations for several decision tasks (investment-, organisational policy-, M&A-, other departmental or cross-departmental decisions, etc.). Managers seek to collect knowledge distributed, exploit know-how and new perspectives of his/her employees and peers in order to make appropriate decisions. Decisive benefits of group decisions are better decision implementation, commitment and support of group members and decision quality.

The group leader has major influence on how group decision-making is performed in organisations. He/she is the supervisor in developing group norms, in managing information collection, in chairing meetings and in choosing final decision-making procedure how the group arrives at final solutions. Basically, six group members are involved in final decision-making, ranging from three to fourteen people. The driving force for the distribution of decision power seems to be expertise, knowledge and experience of group members. Hierarchical factors can be neglected. When considering more options for final solutions, the decision-making entity involves three alternatives. The number of informal and formal meetings varies between one to five meetings and depends on the factors deadline and complexity of the decision task. In most cases, groups try to come up with total consensus via discussion. Although group members of executive boards have voting rights, this entity follows collective decision-making on the basis of consensus. However in executive boards, voting procedures appear to be more likely than in the case of other decision-making bodies.

Zusammenfassung

Der Zweck dieser Masterarbeit besteht darin, empirische Daten über Gruppenentscheidungen in Organisationen zu erheben, um aufzuzeigen, wie und warum Entscheidungsfindungen in Gruppen Teil des Tagesgeschäfts in fast jedem Unternehmen sind.

Mit Hilfe einer Desk Research wurden vier Bereiche der Entscheidungsfindung in Gruppen (Entscheidungsaufgabe, Gruppenmerkmale, Entscheidungsprozess, Ergebnis) identifiziert und umfassend dargestellt. Analog zu diesen Schwerpunkten wurden entsprechende Fallstudien ausgewählt, um einen Einblick in die Praxis von Gruppenentscheidungen in Organisationen zu bekommen.

Aufbauend auf die Ergebnisse der Desk Research und Fallstudien wurde ein Fragebogen für die empirische Feldstudie entwickelt. Es wurden fünfundzwanzig teilstrukturierte Interviews mit Managern aus der oberen Führungsebene von Wiener Unternehmen aus verschiedenen Branchen durchgeführt.

Die Ergebnisse zeigen, dass Entscheidungsfindungen in Gruppen für verschiedenste Aufgaben in unterschiedlichen Gremien erfolgen (investitions- und organisationsbezogen, M&A, andere Abteilungen betreffend und abteilungsübergreifende Angelegenheiten, etc.). Manager versuchen Wissen zu sammeln so wie Know-how und neue Perspektiven der Mitarbeiter/innen zu nutzen, um entsprechende Entscheidungen zu treffen. Bedeutende Vorteile von Gruppenentscheidungen sind eine bessere Entscheidungsumsetzung, Engagement und Unterstützung der Gruppenmitglieder und die Qualität der Entscheidungen.

Der/Die Gruppenleiter/in hat großen Einfluss darauf, wie Gruppen-Entscheidungsfindungen in Organisationen ablaufen. Er oder sie agiert als Supervisor bei der Entwicklung von Gruppennormen, beim Sammeln von Informationen, in Sitzungen und bei der Auswahl endgültiger Entscheidungsverfahren, die zum Erreichen von Lösungen führen. Drei bis vierzehn Personen können an der Entscheidungsfindung beteiligt sein; in der Regel sind es sechs Gruppenmitglieder. Die treibende Kraft für eine Entscheidungsfindung sind Faktoren wie Kompetenz, Wissen und Erfahrung der Gruppenmitglieder; hierarchische Faktoren können vernachlässigt werden. Für eine adäquate Lösung werden in der Regel drei Alternativen diskutiert. Die Zahl der informellen und formellen Sitzungen variiert

zwischen ein bis fünf Sitzungen und ist abhängig von den Faktoren Deadline und Komplexität der Entscheidungsaufgabe. In den meisten Fällen wird versucht, einvernehmliche Lösungen zu finden.