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THE INFLUENCE OF INFORMATION PROCESSING CAPACITY ON CONSENSUS, DECISION SPEED, AND SUPPORT FOR FIRMS IN ACHIEVING SDG

S. Tarigan [1]
R. Y. H. Silitonga [2]

ABSTRACT

Objective: The objective of this study is to investigate the effects of information processing capacity in sustainable development goals (SDG) upon consensus, decision speed, and support for strategic decision. It also tests whether consensus and decision speed are a trade-off in a strategic decision process.

Theoretical Framework: Based on the Information Processing Theory (Galbraith, 1973), it is hypothesized that information processing capacity (participation, interaction and informalization) would positively affect decision process outcomes, i.e. consensus, decision speed, and support for strategic decision.

Method: Measures of each construct were collected through a survey involving 156 TMT members (CEOs and General Managers) from the Indonesian telecommunication, media, and information technology sectors. The result of Partial Least Square analysis confirms that information processing capacity, in terms of participation and interaction, does significantly influence the level of consensus, decision speed, support for decision. However, formalization rather than informalizaton appears to increase the information processing capacity.

Results and Discussion: The result of Partial Least Square analysis confirms that information processing capacity, in terms of participation and interaction, does significantly influence the level of consensus, decision speed, support for decision. However, formalization rather than informalizaton appears to increase the information processing capacity. Further, the study shows that the level of consensus is positively associated with decision speed, suggesting a non trade-off relationship between the two commonly presumed incompatible constructs.

Research Implications: The practical and theoretical implications of this research are discussed, providing insights into how the results can be applied or influence practices in the field of SDG.

Originality/Value: The study contributes to the Information Processing Theory by confirming the positive effect of information processing capacity on decision process outcomes, while showing that formalization can increase information processing capacity.

Keywords: information processing capacity, decision speed, consensus, support for decisions, sustainable development goals (SDGs).

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9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

[1] Sekolah Tinggi Ilmu Ekonomi Harapan Bangsa, Bandung, Indonesia.
E-mail: samuel_tarigan@ithb.ac.id
[2] Institut Teknologi Harapan Bangsa, Bandung, Indonesia, E-mail: roland@ithb.ac.id

1 INTRODUCTION

The information processing perspective views strategic decision making as an effort to process information (March and Olsen, 1976) and organization as an information processing system (e.g. Galbraith, 1977; Tushman and Nadler, 1978; Walsh and Ungson, 1990). The information processing is defined as gathering of data, transformation of data into information, communication, as well as storage of information in an organization (Galbraith, 1973; Tushman and Nadler, 1978). March and Simon (1958) asserts that the purpose an information processing is essentially to reduce uncertainty, which is caused by 1) the lack of information pertaining to environmental factors which are related to certain decisions, 2) the lack of knowledge of the outcome of the decisions, and 3) the inability of the decision makers to determine the probability of success of a decision (Duncan, 1972).

Galbraith (1969, 1973, 1977) defined uncertainty as the difference between the information required and the information that is possessed by the organization. This view implies there is a relationship between uncertainty and information processing. The more uncertain and dynamic an environment is, the higher the information processing requirements. According to the information processing theory, to achieve optimum performance, an organization needs to have a proper fit between information processing requirements and information processing capability. Premkumar, *et al.* (2005) gave an empirical evidence on the importance of such fit for performance.

Therefore, in a sustainable development goals (SDG) - one that is characterized by fast change in demand, competition, technology and regulations (Eisenhardt, 1989) - information processing capacity becomes essential. According to the information processing view (Galbraith, 1974) there are 4 different strategies to improve information processing capacity, that can be grouped into 2 categories: reduce the need for information processing (e.g. creation of slack resources and self-contained task) and increase the capacity to process information (e.g. increase in vertical information systems and creation of lateral relations).

There are at least three empirical studies that provide support to the proposition that organizations can be structured in such a way to increase information processing capacity. Turner and Makhija (2012) found that individuals in organic structures are able to gather and utilize more information, and come up with more similarly interpreted information in comparison to those in mechanistic structure. Static rules, specialized jobs, and hierarchical distribution of responsibilities, make mechanistic structures efficient but not conducive for interactive communication. On the other hand, organic structure is less structured, thefore allowing more lateral communications and more interdependence which increase organizational adaptiveness. Another study by Baum and Wally (2003) found that centralization of strategic management, decentralization of operations management, formalization of organizational routines, and informalization of non-routines have positive effects on decision speed and firm performance. Furthermore, they found that decision speed mediates the relationship between those organizational antecedents and firm performance. Thomas and McDaniel (1990) gave an empirical evidence on the impact of organizational structure on information processing capacity. Thomas and McDaniel (1990) operationally defined the information-processing structure of top management teams during strategic issue interpretation using the dimensions of participation, interaction, and formalization (Duncan, 1974). Structural characteristics such as high levels of participation and interaction and a low level of formalization facilitate a high level of information processing (Galbraith, 1973) and foster extensive use of information (Daft & Lengel, 1986). Thomas and McDaniel (1990) shows that a high level of participation, low use of standard procedures, and high level of interaction - characteristics of structures with a high capacity for information processing indeed lead into interpretations characterized by high variable usage (high capacity).

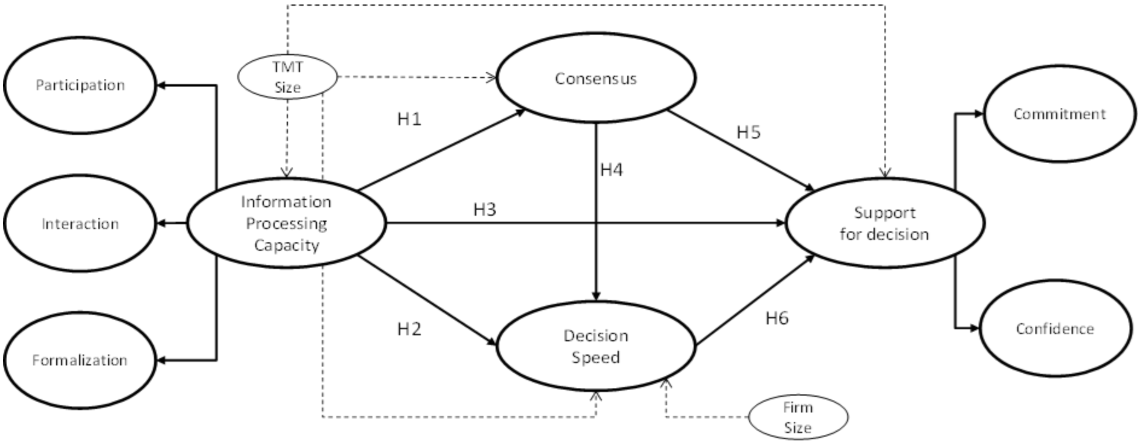
The first purpose of this study is to evaluate the effects of determinants of information processing capacity (level of participation, interactin, and informalization) in organizational structure on decision process outcomes, i.e. consensus, decision speed, and support for decision. The three decision process elements are important aspects of strategic management because they will indirectly affect economic performance of a firm (Rajagopalan, Rasheed and Datta, 1993). A metastudy by Kellermanns *et al.*, (2011) shows the positive effect of consensus on firm performance. Baum and Wally (2003) found that decision speed positively affects firm performance and mediates the relationships between organizational structure (centralization, formalization) and environment (dynamism, munificence) to firm performance. Eisenhardt (1989) has also found that strategic decision speed is a predictor of performance in SDG (Eisenhardt, 1989). Support for decision also has a positive effect on the success of strategic decision implementation. (Dooley and Fryxell).

Another aspect related to strategic decision process that is still obscure is whether consensus and decision speed are actually a trade-off, as commonly assumed (Roberto, 2004). Achieving consensus requires a participative approach that could take more time than an autocratic approach (Vroom and Yetton, 1973 and Wu *et al*, 2022). However, some studies suggested that a participative approach, even if it causes conflicts and debate, does not necessarily slow down a decision process (Talaulicar *et al.*, 2005, Eisenhardt 1989). Turner and Makhija (2012) found similar tension or trade-off between efficiency (speed) generated by vertical communication in mechanistic structures and adaptiveness produced by highly interactive (and participative) communication in organic structures. This research aims to provide clarity on the issue. Therefore, the second purpose of this study is to understand how consensus relate to decision speed, under the influence of information processing capacity.

This is the first large sample study that includes multiple dimensions of information processing capacity which assesses its effects on consensus, decision speed, and support for strategic decision.

Figure 1

Consensus, decision speed, and support for decision: theoretical model with information processing capacity as antec



As shown in Figure 1, the theoretical model proposes that information processing capacity will simultaneously influence consensus, decision speed, support for decision. The model also allows for the assessment of the relationship between consensus and decision speed, as well as the effects of consensus and decision speed on support for decision. Results may help academics and practitioners evaluate the effects of TMT heterogeneity on decision process, decision outcome, and decision implementation.

2 THEORETICAL FRAMEWORK

The following sections elaborate participation, interaction, and formalization based on existing literature and research on the subjects.

2.1 PARTICIPATION

Strategic decision process can be described as a continuum between autractic approach on one end and participative approach on the other. In an autocratic approach decision is made by certain authorized individual or expert. In a participative approach, decisions are made together by participants through consensus. Between these two extremes, decisions are made by “decision by minority” or “decision by majority rule”, (Sager and Gastil, 2006).

Based on the involvement of the members of top management team (TMT), decision process can be classified as domination or authoritarian (members become passive), consultation or influence sharing (members give opinions and information to the leader), participative or power sharing (leader and members found solutions together), and delegation or power distribution (leader assigns members to decide) (Weaver, 1974; Kreitner and Kinicki, 2007).

A participative approach is usually done through consultation, in which the decision maker seeks for inputs and/or recommendations from other parties (Edmondson *et al.*, 2003 and Duchek *et al.*, 2020). Finding solution together is a characteristic of a comprehensive decision making process because it increases the number parties and sources of information in the decision making process (Fredrickson, 1984, p. 453).

One of the greatest advantages of participate approach is increased decision quality (Carmeli, Sheaffer, and Halevi, 2009) because it allows for greater pool of knowledge (Kreitner, 2001; Kreitner and Kinicki, 2007 p.388). Diversity of views during the decision process allows each decision alternative to be evaluated from various perspectives (Simsek *et al.*, 2005; Edmondson *et al.*, 2003), so that together the views form a more complete understanding (Corner, Kinicki, and Keats, 1994; Kreitner, 2001). The participative approach could overcome individual cognitive limitation or schemata, that usually causes a decision maker to rely on previous instead of novel ideas (Sharfman and Dean, 1997). Other benefits of a participative approach include increased acceptance, motivation, and commitment of team members (Kreitner, 2001; Fullan, 1991; Bourgeois, 1980a; Leavitt, 1951; Bavelas, 1951; Vila and Canales, 2008; Su *et al.*, 2022), potential consensus (Priem, 1990, p. 471), and opportunity to newer members to learn about strategic decision making (Karl, 1995). Through participation, exchange of information among TMT members takes place and causes faster identification of problems and opportunities (Dutton and Jackson, 1988).

However, participative approach also has some disadvantages. Fredrickson (1984) showed that comprehensive or participative decision making is more appropriate for stable environment because it takes longer time than non-participative methods (Fredrickson and Mitchell, 1984; Janis, 1972;

Mintzberg 1994 p.325). The more parties involved in a decision making are, the slower the process (March and Olsen, 1976) due to potential conflicts (Hickson *et al.*, 1986; Mintzberg *et al.*, 1976). Therefore, Vroom and Yetton (1973) suggest an autocratic or centralized method to expedite decisions, especially when facing crisis (Ashmos, Duchon, and Bodensteiner, 1997). However, Eisenhardt (1989) argued that there is no connection between autocracy and decision speed. Some autocratic decision makers are slow because of inherent capacity. Participative approach, on the other hand, allows simultaneous alternatives development that can speed up decisions (Judge and Miller, 1991). In line with this, Talaulicar, *et al.* (2005) found that a participative approach in the form of debate did not slow down strategic decisions. Zehir and Ozsahin (2008, p. 709) also found that extensive participation in decision making increases decision speed.

To clarify the mixed results, this research will study the impact of participation as part of information processing capacity on consensus, decision speed, and support for decision.

2.2 INTERACTION

Distinct from participation, the interaction among TMT members is another factor that influences information processing capacity (Duncan, 1974). Interaction is a separate construct from participation because high participation does not guarantee high interaction. Hambrick (1994, 2007) argued that TMTs often do not work as teams because their members work separately or in a fragmented way. Some TMTs seldom meet for discussions, exchange of views, problem solving, or collaboration, thereby neglecting the opportunity to realize the potential synergistic benefits of multiple perspectives (Edmondson *et al.*, 2003).

In a dynamic and uncertain environment where there is very low analyzability, TMTs actually need higher participation and interaction among members to be able to do sense making during decision process (Sharfman and Shaft, 2011). Boone and Hendricks (2009, p. 167) showed that collaborative-interactive behavior moderates the relationship of TMT functional heterogeneity and firm performance (Hambrick (1994). TMT members usually have various information and perspectives on strategic issues (Brodwin and Bourgeois, 1984). Discussion and interaction among TMT members are the mechanism to share and evaluate the information and assumptions, as well as generate inferences and recommendations (Glueck, 1980; Mintzberg, Raisinghani, and Theoret, 1976; Springer and Hofer, 1978; Stagner, 1969). Social interaction allows members of TMT to understand what expertise is available in the team and where to find it (Rulke and Galaskiewicz, 2000) through transactive memory system (Wegner, 1986). Through the system, members where the knowledge resides in the team (Stasser *et al.*, 1995, Austin, 2003). So they can facilitate

Interaction could also have a positive effect on decision speed. Turner and Makhija (2012) shows that organic structure that is characterized among others by interaction and intensive discussion, increases information processing capacity, which is measured by the amount of information processed in gathering, interpretation, and synthesis stages. This means that in theory given a certain amount of information processing need, firms with higher interaction among their TMTs will make faster strategic decisions.

Interaction also increases acceptance and commitment to implement high quality decisions that are produced through combination of various perspectives (Barrick, Bradley, Kristof-Brown, and Colbert, 2007; Carmeli and Schaubroeck, 2006; and Mason and Mitroff, 1981).

Therefore, interaction is an element of information processing structure that (Duncan, 1974) that can affect decision comprehensiveness, decision speed, consensus, and support for decision consensus (Boone *et al.*, 2009 p.267; Schweiger *et al.*, 1986).

2.3 FORMALIZATION

A formal organization structure is characterized by articulate and explicit policies, job descriptions, organization charts, strategic and operational plans, and objectives setting systems (Baum and Wally, 2003, p. 1113). In a formal system, there is little flexibility as to who can decide or act, or even as to how an individual can decide or act. Therefore, the level of formalization in an organization can affect the strategic decision process (Grinyer and Yasai-Ardekani, 1981).

Formalization can have positive (Schwenk and Shrader, 1993; Lechner and Floyd, 2012), neutral (Slevin and Covin, 1995), or negative effects on performance. In a dynamic or high velocity, formalization can reduce performance (Fredrickson and Iaquinto, 1989) because it hinders adaptability, open communication, and fast competitive responses (Khandwalla, 1977).

Even though the negative effect of formalization on strategic decision speed can often be found in large and bureaucratic organization (Ford and Slocum, 1977, p. 451), Baum and Wally (2003) argued that organizations would be better-off if they formalize routine activities and while keeping the non-routines informal (Adler and Borys, 1996).

High level of formalization also tends to cause organization to be reactive, less proactive in finding new prospects, and ignore opportunities because these behaviors are not monitored in the existing formal systems (Lenz and Lyles, 1983; White, Dittrich, and Lang, 1980). It allows incremental rather than synoptic improvements.

Formal organizations usually establish standard procedures in their decision making (Cyert and March, 1963; Steinbruner, 1974 in Fredrickson, 1986) such that the variables triggering decisions and their responses have already been (Allison, 1971). Unfortunately, when this happens, the process can become more important than the goals.

Despite the numerous observations on negative effect of formalization, Schendel and Hofer (1979) showed that formalization, in the form of formal budgeting and planning systems, can be beneficial if accompanied with sufficient level of details, because they provide better integrations of decisions. However, the benefit of integration is rather limited because a truly comprehensive integration is almost impossible to attain, since strategic decisions can not be made by finding holistic optimum of a single matrix where all relevant factors are taken into consideration (Quinn, 1978, p. 17)."

Formalization can also affect consensus. A structured and formal group tends to limit its limits of freedom of individual actions (Stogdill, 1959) thereby potentially increasing consensus (Priem, 1990, p. 471). By limiting the behavior of members, formalization can reduce differences of opinions among group members with regard to the team goals (Ouchi, 1978). However, such specific goals usually pertain to efficiency related and incremental actions to remedy existing situations and not related to strategic actions that are future oriented (Fredrickson, 1986, p. 287).

Therefore, when facing strategic decisions, especially those related with new circumstances, formalization can in fact reduce consensus because the TMT members will have more difficulties in constructing common frame about the situations at hand. Through informal discussions and interaction, TMT members can better integrate various perceptions and generate common understanding which are better than individual understanding (Walsh, Henderson and Deighton, 1988).

In line with Galbraith (1973), this study will take the stance that low level of formalization will increase information processing capacity (and thereby affect decision speed), and allow for more effective common frame construction and (thereby affect consensus as well as support for decision).

3 METHODOLOGY

The first set of research questions include the following hypotheses: 'Does information processing capacity affect consensus (Hypothesis 1), decision speed (Hypothesis 2), and support for decision (Hypothesis 3)?' The second research question is: 'Is the relationship between consensus and decision speed a trade-off (Hypothesis 4)'. A significant and positive collelation between the two variables will indicate that the relationship is not a trade-off. The final set of questions are: 'Do consensus (Hypothesis 5) and decision speed (Hypothesis 6) affect support for decision?'

3.1 INFORMATION PROCESSING CAPACITY AND CONSENSUS

In this study, information processing capacity is operationalized by three dimensions: level of participation, interaction, and formalization as defined by

Duncan (1974). Using the same operationalization, Thomas and McDaniel (1990) argued that information processing structure that is characterized by high participation, high interaction, and low formalization will facilitate high capacity information processing capacity (Galbraith, 1973) that will result in more extensive information usage (Daft and Lengel, 1986) in decision making.

High capacity of information processing could increase not only the rate of information processing, but also the level of consensus in decision making. Even though participation and interaction could reduce consensus because of the differences in individual cognitive process and perception among TMT members (Hambrick and Mason, 1984), they could increase acceptance by team members because the decision is the result of negotiation and combination of various perspectives (Bourgeois and Brodwin, 1984, p. 241).

Discussion and interaction in TMT allow information exchange that is required to produce common inference, assumptions, and recommendations (Glueck, 1980; Mintzberg, Raisinghani, and Theoret, 1976; Springer and Hofer, 1978; Stagner, 1969). Priem (1990) argued that the process of gaining consensus can be done through a traditional method, in which each member propose his/her opinion then they negotiate to seek agreements (Knight *et al.*, 1999), or through conflict methods such as dialectical inquiries or devil's advocacy (Priem, 1990). Each of the three consensus process methods requires highly participative and interactive decision making (Priem, 1990).

Based on the parallel information processing model (Corner, Kinicki, and Keats, 1994), participation and interaction allow TMT members to exchange information on stimuli (in the attention stage) and shared meaning (in the frame construction stage) of the stimuli that has passed the attention filter: whether the situation at hand is regarded as positive or negative, opportunities or threats, gain or loss, controllable or non-controllable (Dutton and Jackson, 1987). The information exchange through participation and interaction allows each members of TMT to build more similar understanding of the problem at hand, and the potential solutions.

A low level of formalization, also helps the process of achieving consensus. A high level of formalization inhibits open communication among TMT members and limits the information exchange (Khandwalla, 1977). Throguh informal discussions and interactions, TMT members can easier combine different individual perspectives in order to build better common understanding (Walsh, Henderson, and Deighton, 1988).

In conclusion, a high information processing capacity, which is characterized by a high level of participation, high level of interaction, and low level of formalization could increase the level of consensus in a strategic decision making. Therefore it is hypothesized that:

Hypothesis 1: Information processing capacity will have a positive effect on consensus

3.2 INFORMATION PROCESSING CAPACITY AND DECISION SPEED

An organic structure, that is typified by highly participative, interactive, informal and lateral communication has been found to cause individuals to gather, interpret, and synthesize more information (Turner and Makija, 2012). Thomas and McDaniel (1990)'s empirical study also suggests that high information processing capacity causes TMTs to consider more variables more deeply (Thomas and McDaniel, 1990). By being able to consider more factors, TMT can build more alternatives in parallel and come up with a decision faster (Eisenhardt, 1989). The more participative and interactive decision making in TMT is, the faster information gathering and processing are and the faster the decision is made (Zehir and Ozsahin, 2008, p. 720).

Without sufficient level of participation and interaction when making a strategic decision, the team could experience information overload (Mintzberg, 1983), that could produce nonproductive stress in the team (Bronner, 1982; Cangelosi and Dill, 1965; Taylor, 1975), the feeling of inability to predict consequences of actions (Holsti, 1971), the perception of loss of control (Paige, 1968), or analysis paralysis (Langley, 1995), all of which could delay decision.

A low level of formalization, that characterizes a high level of information processing capacity, also facilitates open communication and rapid response (Khandwalla, 1977) and increases the perception of freedom of action or flexibility by the decision makers (Baum and Wally, 2003) that helps them come up with decision faster.

It can be concluded, therefore, that information processing capacity affects strategic decision speed. Consequently, it is hypothesized that:

Hypothesis 2: Information processing capacity will have a positive effect on decision speed

3.3 INFORMATION PROCESSING CAPACITY AND SUPPORT FOR DECISION

TMT members' support for decision depends not only on the decision content, but also on the decision process. A highly participative, interactive, and less formal decision process could result in TMT members' perception that the decision process has been conducted in a fair way. Some researchers have found that even though some members disagree with the decision content, they could commit themselves to implement the decisions as long as they believe the decision process if fair (Kim and Mauborgne, 1997). TMT members also can increase their support toward the decision, despite personal disagreements, if they believe that the decision is of high quality (Adidam and Bingi, 2000) because it is taken after considering various perspectives that leave no stones unturned.

As Eisenhardt (1989) found, top management teams with the capacity to access and process information about strategic issues can cope with stress and anxiety. These teams impart a sense of mastery and control to decision makers since the executives feel they have surveyed and processed the needed information, leaving no stones unturned. Another research by Sniezek (1992) showed that groups tend to have higher confidence than individuals, and that group confidence will increase through discussion within the group.

Accordingly, it is hypothesized that:

Hypothesis 3: Information processing capacity will have a positive effect on support for decision

3.4 CONSENSUS AND DECISION SPEED

Consensus and decision speed are often to be perceived as a trade-off (Roberto, 2004) because any participative decision making approach, especially the process to achieve consensus, is often assumed to be time consuming. The view implies that there is a negative correlation between consensus and decision speed. This study, however, will adopt a contrarian view that is consistent with some empirical evidence. A decision process which involves debate (Talaulicar *et al*., 2005), or participative and comprehensive approach (Eisenhardt, 1989), does not have to be slow.

To understand the phenomenon, we need to examine the different effects of consensus on decision speed when the decision is made by homogeneous TMTs versus by heterogeneous teams.

In a homogeneous TMT, there are generally few interpersonal conflicts and more agreement seeking efforts (Knight *et al* 1999). Therefore, consensus could easily be reached and decisions could be made quickly. The result is high consensus and high decision speed, suggesting a *positive* relationship between the two.

In a heterogeneous TMT, decision making tend to be longer due to conflicts (Knight *et al*, 1999) and interruptions (Mintzberg, Raisinghani and Theoret, 1976) that could delay decision making (Hickson *et al*., 1986). However, a more careful look at the situation suggests three possibilities that can take place within a heterogeneous TMT.

First, when a heterogeneous TMT experiences conflicts, the team could try to achieve consensus and resolve conflicts through lengthy negotiations and compromises. The result is high consensus but low decision speed, suggesting a *negative* relationship as commonly assumed (Roberto, 2004).

Second and possibly most likely scenario, a heterogeneous TMT ends up with a lower than ideal level of consensus despite lengthy conflict resolution efforts. As Amason (1996) pointed out, some disagreements, especially interpersonal or relations-oriented conflicts, are not easy to resolve. An example of this scenario is when a CEO makes the final call because there is simply no more time left for deliberation and discussion (e.g. deadlines), even though there are still some disagreements within the TMT. The result is low consensus and low decision speed, suggesting a *positive* relationship between the two constructs.

Third, a conflict resolution mechanism like 'consensus with qualification' (Eisenhardt, 1989) could help heterogeneous TMTs resolve conflicts quickly by authorizing the most appropriate individual to make the final decision when consensus can not be reached after a certain period of time (sometimes referred to as time boxing). Because the mechanism has become a norm in the team, the result is high consensus and high decision speed, suggesting again a *positive* relationship.

Overall, therefore it is hypothesized that

Hypothesis 4: Consensus will be positively related to decision speed

3.5 CONSENSUS AND SUPPORT FOR DECISION

Prior research highlights the importance of achieving consensus during a decision process to ensure better implementation at a later stage (Scheiger and Sandberg, 1991). One early perspective in management could be represented by a statement made by a Roman politician Cicero "Diversity in council, unity in command". It suggests that diversity of views, debates and disagreements can enhance decision quality. But once a decision is made, all TMT members must fully support its implementation. This view implies that the decision making and implementation are two independent stages (Dooley and Fryxell, 1999).

A more modern perspective, however, sees that the two stages are interdependent. Interaction among TMT members during a strategic decision process will also affect their level of support for the decision during the implementation stage (Schweiger and Sandberg, 1991). A participative decision process that attempts to reach consensus will increase support for the decisions and commitment of TMT members during implementation (Parayitam, Olson and Bao, 2010; Stahl and Maznevski, 2021). Without consensus, the implementation process could be jeopardized by interdepartmental politics (Dooley and Fryxell, 1999, p. 389).

Consensus also increases TMT's support for the decision because it raises each member's confidence in the decision. Sniezek (1992) showed that groups tend to have higher confidence than individuals, and that group confidence will increase through discussion within the group. When a TMT finally reaches consensus following a discussion process, the members are likely to be more certain about their choice because they feel that there are no alternatives that have been overlooked (Eisenhardt, 1989 p. 572). Adidam and Bingi (2000) demonstrated that member perception toward decision quality positively affects the confidence on the decision. It can therefore be argued that consensus increases both TMT's confidence in and commitment to the decision, thus it is hypothesized

Hypothesis 5: Consensus will have a positive effect on support for decision.

3.6 DECISION SPEED AND SUPPORT FOR DECISION

The last hypothesis is based on prior studies that demonstrate the effects of decision speed on commitment to and confidence in the decision.

Decisions that are quickly made can cause TMT to act faster in the future (Perlow, Okhuysen, and Repenning, 2002). Companies that make fast decisions tend to maintain, even increase, its speed by increasing resource commitment so that the decision can also be quickly implemented. Perlow *et al*. 2002 called the phenomenon as speed trap, that is an internal pressure to continually increase or reduce speed (p. 948). TMT's preference for decision speed to comprehensiveness could provide reinforcing feedback for the organization to act and even faster in the future, possibly by increasing commitment during implementation.

Decision speed also can increase TMT's confidence in a decision, especially in a dynamic environment. In a SDG, TMT needs to be able to respond and make decision quickly or else the decisions will be obsolete and irrelevant. Accordingly, when TMT members feel that they have made a timely decision, their perception of the decision's overall quality and effectiveness increases. And when their perception of decision quality increases, so does their confidence in it (Adidam and Bingi, 2000). It is therefore hypothesized that

Hypothesis 6: Decision speed will have a positive effect on support for decision.

The participants of this study consist of TMTs from the telecommunication, media, and information technology sectors in Indonesia. The context for this research was selected based on three reasons. First, the three sectors meet the criteria for SDG, in which decision speed is a predictor of performance (Eisenhardt, 1989). 1988). A high velocity environment is characterized by fast and discontinue changes in demand, competition, technology, and/or regulation (Bourgeois and Eisenhardt, 1988). All the sectors in this survey experience challenges presented by disruptive technologies (such as mobile internet and cloud computing), fast growing market driven by Indonesia's strong economic growth in the last 10 years, new domestic and international players that quickly change the competition landscape, as well as regulations that support liberalization of the sector. Second, each of the three sectors has relatively low penetration compared to other sectors in the country providing significant room for growth. The benefits that can be gained from the research are likely to be greater than those from studies in mature sectors, because the insights can be applied by more stakeholders for longer time. Finally, to the authors knowledge, there has been no published studies in strategic decision process in Indonesia, one of the fastest growing economies in the world that is projected by McKinsey to be the 7th largest economies by 2030 (Oberman, 2012). This study could result in greater managerial and economic values than if it was done one in other economy.

Data were collected by sending 2,500 questionnaires to TMTs from 2,383 firms located in major cities such as Jakarta, Bandung, Surabaya, Malang, Semarang, Medan, Tangerang, and Yogyakarta, Denpasar and 54 other cities in Indonesia. As many as 48 questionnaires were returned for invalid addresses. An online version was sent individually to e-mail addresses of TMT members, and not to mailing list to ensure that each survey is completed by relevant respondent.

The company database was built from data obtained from the Indonesian Society for Creative Industries (MIKTI) and the Indonesian Infocom Society (MASTEL). Both organizations are considered superbody (association of associations) and authoritative because they are endorsed by the government of Indonesia.

To maximize the response rate, some steps suggested by Dillman (2000) were taken after the distribution, that includes: sending introductory letter that explaining the benefits of participation in the survey, promising summary of the research findings, following up by e-mails/phone calls/letters, using prepaid postage, and resending questionnaires to the sector with lowest response rate.

To be a valid response, the survey must be fully completed by executives that belong to the TMT, i.e. the CEO or his direct reports, or officers in the top two levels in the company or business unit. The criteria is in line with one that is previously applied in similar studies (Kreitner and Kinicki, 2007, p. 35; O'Reilly *et al.*, 1993 in Pettigrew 1992, p. 176, Wiersema and Bantel, 1992).

The follow up efforts are conducted until the number of respondents reaches the targeted range for Partial Least Square analysis, which is around 30-100 samples (Stan and Saporta, 2005). After three months of follow up, we finally received 174 responses, of which 156 were usable, so the response rate is 6.96%. The distribution of the respondents by sector represents relatively well the company distribution, as presented in Table I.

Table 1

Response rate by sector

	Telecommunication	Media	Information Technology
Usable Responses	72 (46%)	25 (16%)	59 (38%)
Number of questionnaires sent	940 (42%)	338 (15%)	938 (42%)
Response Rate untuk subsektor	7.66%	7.40%	6.29%

The low response rate can be explained by two possible reasons. First, this study involves participation of TMT members that are generally occupied by other priorities, as suggested by the low average response rate for TMT studies in the US (Cycyota and Harrison, 2006) Secondly, in Indonesia, TMTs could be less inclined to be involved in research than their counterparts in developed countries, because of the lower use of academic research in business practices, as suggested by one respondent.

The companies are divided into three categories, based on annual revenues (small firm < Rp. 10 billion, medium Rp. 10-50 billion, large > Rp. 50 billion) or in the case not available based on number of employees (small firm < 20, medium 20-200, large > 300 employees).

As presented in Table II, most respondents come from large companies perhaps because the this type of study is more relevant with the level of complexity that they face on daily basis. As many as 90% of respondents are male. On average the respondents are 42.5 years old, with 14.6 years of work experience and 5.5 years' experience as top executives. From the functional background perspective, 56% come from business development, 21% from operation and production, and 23% from support functions (IT/EDP, Finance, HR).

Table 2

Respondents by sector and firm size

	Telecommunication	Media	Information Technology	Total
Small	6	3	22	31
Medium	12	6	25	43
Large	54	16	12	82
Total	72	25	59	156

3.7 UNIT OF ANALYSIS

In the survey, each participant was asked to determine one decision of own choice that will be used as a reference when answering questions throughout the questionnaire. The selected decision must fulfill the following criteria: 1) it must be strategic (important, high impact, cross functional, long run implication), 2) it must be taken not more than 12 months of the survey date (in order to minimize memory bias) and 3) the participant must be directly involved in the decision process.

Because the reference strategic decision can vary from one respondent to another, the appropriate unit of analysis is 'strategic decision'. It means that several respondents from a single company could represent different cases in the analysis.

Analysis on the results shows that the wide variety of strategic decisions chosen by the respondents can be summarized into six main categories: 1) business development (new products, growth strategy, etc.). 2) organization restructuring, 3) new technology/system/infrastructure implementation, 4) alliances and mergers, 5) competitive and marketing strategy, 6) others (financing, divestment strategy).

3.8 QUESTIONNAIRES

The six hypotheses were tested with measures derived from the literature. The first set of questions was sent to 17 participants who agreed to take part in the pilot study. The inputs during pilot study, mostly dealing with language and clarity, were used as the basis for refinements. The final questionnaire consists of 67 questions that are used as measures for the six latent variables in the theoretical model. Each question uses a 1-6 Likert scale.

3.9 MEASURES

3.9.1 Information processing capacity

In this study, information processing capacity, is a second order construct that is operationalized by three dimensions, i.e. participation, interaction, informality (Galbraith, 1973, Duncan, 1974, Thomas and McDaniel, 1999). It is measured through a 1-6 Likert scale.

Participation is a first order variable of information processing capacity consisting of six items that measure how far each member can participate in various stages of strategic decision making (Zehir and Ozsahin, 2008): problem identification, information gathering, alternative development, final decision making. It also asks whether the overall decision process has not been dominated by one or two members (Thomas and McDaniel, 1990; Duncan, 1973, 1974).

Interaction is a first order variable of information processing capacity consisting of six items that measure whether the team members work together as a group along the four stages of decision making based on the parallel information processing model (Corner, Kinicki, and Keats, 1994): attention, encoding, storage/retrieval, and decision stage. The items are developed based on previous studies by Thomas and MacDaniel (1990) and Duncan (1973, 1974).

Formalization is a the third dimension of information processing capacity consisting of eleven items that are developed based on previous studies by Thomas and McDaniel (1990), Duncan (1973, 1974), Baum and Wally (2003), and Eisenhardt (1989). These items measure the level formalization across three aspects of strategic decision making: procedures, communications, and documentation.

As previously explained, formalization has a negative relationship with information processing capacity. Therefore the measurement of formalization could be understood as an inverted measurement of information processing capacity (i.e. a higher level of formalization on the Likert scale means a lower level of information processing capacity). Therefore, it is expected that the coefficient between the information processing capacity as the second order variable and formalization as its first order variable is negative.

3.9.2 Consensus

Kellermanns *et al.* (2011) demonstrated that prior studies used at least three methods to measure consensus. First, some use standard deviation of each of the strategy dimensions (for example Dess, 1987 p. 268). Second, some use differences between responses of an influential individual (usually CEO) and those of his subordinates, that result in Euclidian distance (Dess, 1987; West and Schwenk, 1996). Third, some use consistency index, that is the average correlation among several dimensions of strategy content among individuals (Homburg *et al.*, 1999). Because in this study strategic decision was freely defined by each respondent, the cases referred by the respondents could vary, even within the same TMT. Therefore, none of the methods suggested by Kellermanns *et al.* (2011) could be used. Instead, the study uses the perception of TMT members on the level of consensus achieved in each of the decision making steps based on Parallel Information Processing Model (Corner, Kinicki, and Keats, 1994). The latent variable of consensus was operationalized by twelve items measuring the respondent's perception on the level of consensus achieved the attention, encoding, retrieval/storage and final decision steps.

3.9.3 Decision speed

In this study, the respondents are asked to assess how fast the reference strategic decision was made by answering eleven items. The assessment includes the speed of the individual decision making steps, from the stimulus for action was perceived until the commitment for action was made (Mintzberg 1979, p. 58), or from "the first proposal" until "the output of final decision" (Hage, 1980, p. 117). Among others, the respondents were asked to indicate their perception on the relative speed of decision making compared to the window of opportunity and to competitor's speed for similar strategic decision.

This method of relative measurement is more relevant than the quantitative measurement using duration (e.g. number of days in decision making) used by Eisenhardt, 1989, p. 549 or Judge and Miller, 1991 p. 455) because the decisions referred by the respondents varied in terms of decision type, complexity, risk, and urgency.

3.9.4 Support for decision

Consistent with prior research, we defined support for decision as the commitment and confidence of TMT members in a decision. Commitment was measured using nine items, that were developed based on the six items used by Dooley and Fryxell (1999). The measures include items such as TMT perception on emotional attachment, commitment for resource mobilization, involvement in implementation, and mobilization of subordinates.

Confidence was measured using twelve items that were developed based on combined instruments in previous studies (Sniezek, 1992; Adidam and Bingi, 2000; Eisenhardt, 1989; Stevenson and Gumpert, 1985; Dooley and Fryxell, 1999; and Kellermans *et al.*, 2011). The measures include respondent's confidence in quality of the decision process, quality of the decisions themselves (outputs), and potential outcomes (successful implementation).

3.9.5 Control variables

In the study, there are two variables that were included as controls, i.e. TMT size and firm size. TMT size may affect heterogeneity, level of consensus, decision speed, as well as support for decision (Haleblian and Finkelstein, 1993). As the size of a TMT increases it could be more difficult to reach agreement among the members. The TMT size variable is measured by the number of TMT members at the top two levels within the organizational unit that made the reference strategic decision so as to fit the TMT definition by Wiersema and Bantel (1992). The second control, firm size, is an ordinal variable consisting of three values: small, medium, large as previously explained. As a company gets larger, the level of complexity of the strategic decisions could rise, hence lower decision speed.

4 RESULTS AND DISCUSSIONS

Table 3

Means, standard deviation, and correlations

Indicators		Mean	SD	1	2	3	4	5	6	7
1	Participation	5.00	0.99	1						
2	Interaction	4.73	1.10	0.605**	1					
3	Formalization	4.19	1.44	0.209**	0.459**	1				
4	Consensus	4.99	0.83	0.488**	0.575**	0.386**	1			
5	Speed	4.49	1.10	0.391**	0.549**	0.364**	0.592**	1		
6	Commitment	4.96	0.91	0.535**	0.602**	0.376**	0.680**	0.620**	1	
7	Confidence	5.06	0.73	0.381**	0.573**	0.412**	0.660**	0.611**	0.770**	1

** Correlation is significant at the 0.01 level (2-tailed)

Table 3 displays descriptive statistics and correlations for each of the first order variables. On average, each of the information processing capacity is relatively high. Participation, interaction, and formalization average score are 5.00, 4.73, and 4.19 on a 1 to 6 scale. The average levels of consensus, speed, commitment, and confidence were relatively high, ranging from 4.49 to 5.06.

To test the hypotheses, statistical analysis were conducted in two stages. The first stage tests the validity and reliability of the measurement model. The second stage is the estimation procedure to assess the likelihood that a given strategic decision, information processing capacity had impacted the level of consensus, decision speed, and support for decision. To do the estimation, a variance based Structural Equation Modeling (SEM), or commonly referred to as the partial least square (PLS), analysis was chosen because of the limited number of samples. (Stan and Saporta, 2005). Using the alternative method of SEM, i.e. LISREL, the number of cases must be at least 5 times of the number of measurement items (5x67 =335 samples), whereas PLS requires only 30-100 cases.

The PLS analysis was conducted by using the software SmartPLS 2.0 (Ringle, Wende and Will, 2005) that is available for download at www.smartpls.de.

4.1 VALIDITY AND RELIABILITY OF THE REFLECTIVE CONSTRUCTS IN THE MEASUREMENT MODEL

To ensure validity of the measurement model, a standard statistical routine to select items from the first order latent variables was conducted. First, measurement items that have loading lower than 0.5 are dropped from the measurement model (Igbaria *et al*, 2007) to ensure convergent validity. Second, further removal of measurement items is conducted until the Average Variance Extracted (AVE) of each latent variable is at least 0.5 to ensure convergent validity (Doll, Xia, and Torkzadeh, 1994). The reliability of the measurement model is assessed based on two criteria, composite reliability (CR) and Cronbach's alpha (CA). Both must be greater than 0.7.

Table 4

Convergent validity and reliability of the measurement model

First Order Latent Variable	Number of items		AVE	Composite Reliability	Cronbach's Alpha
	Initial	Final			
Information Processing Capacity					
Participation	6	6	0.60	0.90	0.87
Interaction	6	5	0.51	0.84	0.76
Formalization	11	9	0.57	0.92	0.90
Consensus	11	10	0.51	0.91	0.89
Speed	11	9	0.67	0.95	0.93
Support for Decision					
Commitment	10	9	0.68	0.95	0.94
Confidence	12	12	0.59	0.94	0.94
TOTAL	**67**	**60**			

Table 4 presents the numbers of measurement items in the initial and final models. The AVEs, CRs, CAs in the final model are also presented. The table shows that all first order variables in the final measurement model are valid and reliable.

4.2 VALIDITY OF THE SECOND ORDER CONSTRUCTS IN THE MEASUREMENT MODEL

For the two second order constructs - information processing capacity and support for decision - weights (or loadings) and t-statistics were estimated for the inner path coefficients in order to assess whether the direction of the latent variable is as hypothesized and has statistical significance (Coltman *et al.*, 2008).

In the refined model, both second-order constructs have good validity because each path toward their first-order constructs has coefficient greater than 0.5 (Doll, Xia, and Torkzadeh, 1994) and is statistically significant ($p<0.01$) as presented in Table V.

Table 5

Validity of the second order constructs

Second order variable	First order variable	*Loading*	*t-value*
Information Processing Capacity	Participation	0.73**	11.56
	Interaction	0.84**	34.83
	Formalization	0.77**	16.91
Support for decision	Commitment	0.93**	73.23
	Confidence	0.95**	77.80

** Significant at the 0.01 level (2 -tailed)

4.3 DISCRIMINANT VALIDITY OF THE MEASUREMENT MODEL

Finally, the measurement model was tested for discriminant validity. The correlations between each first order latent construct with others must be smaller than the square root of its AVE. When the condition is met, the indicators of a construct are related with its construct more than with other latent variables. In this study, the condition for discriminant validity is fully met.

4.3.1 Analysis of the structural model

Having tested for validity and reliability of the measurement model, the structural model was tested for fit. Even though there is no overall fit index in PLS (that can indicate simultaneously how well the measurement and structural models fit the data), Vinzi, Trinchera, and Amato (2010) suggest that a PLS model be evaluated based on quality indexes such as: (1) communality as quality measure of the measurement model for each variable, (2) average communality as quality measure of the overall measurement model, (3) R^2 as quality measure of each structural equation, (4) redundancy as measure of the prediction performance of the measurement model toward the structural model, (5) average redundancy as global quality measure of the structural model, (6) goodness of fit (GoF) index which is $\sqrt{\overline{Com} \text{ x } \overline{R^2}}$ percentage of achieavable fit (Tenenhaus, Amato, and Vinzi, 2004). Chin (1998) also suggests that the overall structural model fit is assesssed by percentage of with coefficient greater than 0.2, and ideally above 0.3. The qualite indexes for the measurement and structural model used in the study is presented in Table VI.

Table 6

PLS model quality indexes

Variable	R^2	*Communality*	*Redundancy*
Exogeneous Variables			
Participation	0.54	0.60	0.32
Interaction	0.70	0.51	0.36
Formalization	0.60	0.57	0.33
Informaton Processing Capacity	0.01	0.34	0.00
Endogeneous Variables			
Consensus	0.39	0.51	0.18
Speed	0.41	0.67	0.21
Commitment	0.87	0.68	0.59
Confidence	0.90	0.59	0.53
Support for Decision	0.62	0.53	0.22
Average for endogenous variables	0.64	0.60	0.35
Average for all variables	0.56	0.56	0.30

Based on the criteria of overall structural fitness (Chin, 1998) it can be concluded that the data has good with the structural model. All of the six paths (100%) are statistically significant, three paths (50%) have coefficients above 0.3 meeting the criteria of ideal fitness. There are two path coefficients (information processing capacity to decision speed, and decision speed to support for decision) that have values close to 0.3. The weakest path is the direct path between information processing capacity and support for decision. The overall goodness of fit (Tenenhaus, Amato, and Vinzi, 2004) is $\sqrt{0.64\ x\ 0.60}$ = 0.62, which means the model has achieved 62% of achievable fit.

Following the overall model quality assessment, the estimates for coefficients among latent variables in the structural model were used to test the hypotheses. The results are presented in Figure 2 and Table VII. The analysis shows that (1) information processing capacity increases consensus, decision speed, and support for decision, (2) consensus is positively correlated with decision speed, and (3) consensus and decision speed increase support for decision.

Table 7

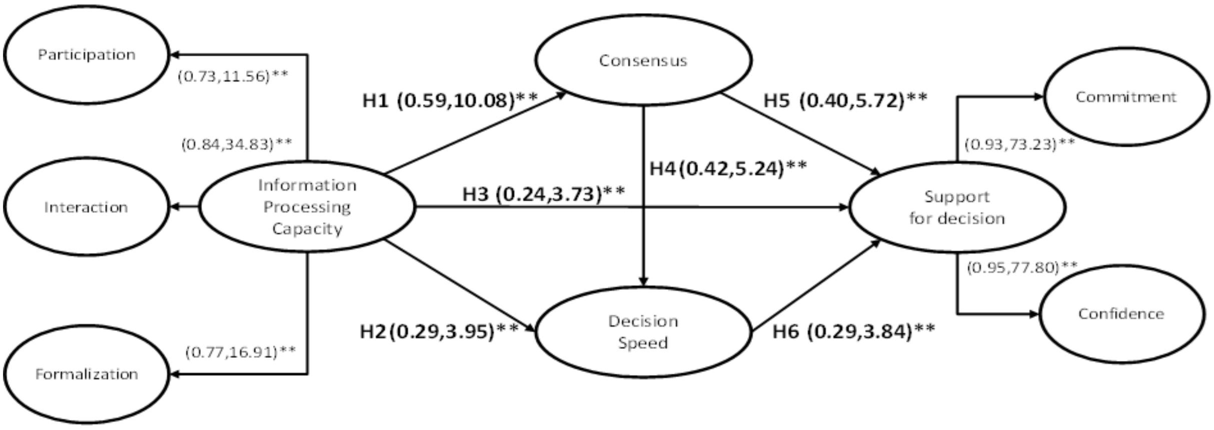
PLS model quality indexes

Path	Structural Coefficient	*t-value*	Conclusion
Information processing capacity → Consensus	0.59	10.08	H1 suppported
Information processing capacity → Speed	0.29	3.95	H2 supported
Information processing capacity → Support for Decision	0.24	3.73	H3 supported
Consensus → Speed	0.42	5.24	H4 supported
Consensus → Support for Decision	0.40	5.72	H5 supported
Speed → Support for Decision	0.29	3.84	H6 supported
Control Variables			
TMT Size → Consensus	0.15	2.27	Significant
TMT Size → Support for Decision	-0.00	0.04	Not significant
TMT Size → Speed	-0.06	0.97	Not significant
TMT Size → Information processing capacity	0.11	1.24	Not significant
Firm Size → Speed	0.05	0.68	Not significant

** Significant p<0.01

Figure 2

Result of Structural Modal Analysis



Loading > 0.5 good validity
*significant → p<0.05 or t>1.96; ** significant → p<0.01 or t>2.576

This analysis shows that all hypothesis have been supported. However, it is important to note that the direction of the path between information processing capacity to its first order variable formalization is positive, contrary to the expectation. This contradicts previous notion and findings that low level of formalization characterizes high information processing capacity (Galbraith, 1973; Duncan, 1974; Thomas and MacDaniel, 1999).

5 CONCLUSION

This study contributes to extant knowledge on decision process by corroborating the positive effects of information processing capacity on consensus, decision speed, and support for decision. Secondly, this study adds to the decision making theory that consensus and decision speed are not a trade-off or mutually incompatible. Thirdly, this study corroborates the theory that consensus increases support for decision. Lastly, it adds to knowledge from previous studies on decision speed by showing its positive effect on support for decision.

The empirical results also have interesting managerial implications. Executives need to pay close attention not only to ‘what’, but also to ‘how’ and ‘how fast’ the decision is made. The result of this study implies that in a SDG firms should generally attempt to achieve consensus and make strategic decisions fast (Baum and Wally, 2003, Eisenhardt, 1989 and Aboramadan, 2021) by increasing their information processing capacity to gain several benefits.

First, by increasing participation, interaction, and procedural formalization in the strategic decision making process, TMTs could increase support during implementation by achieving consensus (Adham & Sukkar, 2024). Even when unanimous agreement could not be achieved, highly participative, interactive, and formalized process could create the perception of fairness through increased engagement, expectation clarity, and explanation (Kim and Mauborgne, 1997; Parker, 1990). The perception of fair process could in turn generate better support during implementation.

Secondly, by ensuring sufficient level of participation, interaction and formalization, TMTs also could benefit from greater comprehensiveness of the decision process (Fredrickson and Mithcell, 1984; Talaulicar, 2005). Lastly, even if a firm makes an ineffective strategic decision, when consensus and decision speed are ensured, it could attribute lack of performance more to the decision contents (decision quality), rather than to decision’s timeliness or level of support and commitment during implementation. When such case happens, the firm could learn from the environment and readjust its direction (Eisenhardt, 1989; Mosakowski, 1997 in Baum and Wally, 2003).

There are some methodological as well as scope limitations in this study. First, the data collection is based on self-report or perception of TMT members. A more comprehensive survey may provide better measurement.

For example, instead of using a perception based consensus measurements, future study could use more objective methods such as distance scores or Euclidian scores or index of consistency (Amason, 1996; Dess, 1987; Wooldridge and Floyd, 1990; Roberto, 2004, Kellermanns *et al*, 2011). A metasudy on consensus by Kellermanns, *et al*, (2011) showed that differences in measurement methods may have explained previous inconsistent results. The use of perception to measure decision speed in this study may also result in lower than actual indicator (Yang, 2010).

Secondly, the measurement is based on single-rater method. The use of multi-rater method for each decision may have less subjective measurement for each unit of analysis.

Thirdly, the use of qualitative observation along with the quantitative data may overcome the recollection/retrospective bias (Roberto, 2004) that may have influenced the memory of participants with regard to the reference decisions.

Fourthly, the study is conducted in a context where all of the companies operate in a culture of high collectivism and high power distance (Hofstede, 2001). In this context, TMTs could be vulnerable to groupthink phenomenon (Janis, 1972), that will result in high speed high consensus decision process.

Therefore, the results of this may not be generalizable to other contexts. A comparative study in the future may reveal differences of the effects of information processing capacity in state versus private companies, public versus private companies, and companies in collective versus individual culture, or in high versus low power distance culture.

Future studies also could be undertaken to understand the effects of information processing capacity on the stages subsequent to decision making, such as success of the implementation, decision outcome (actual vs. intended), and economic outcome.

REFERENCES

Aboramadan, M. (2021). Top management teams characteristics and firms performance: literature review and avenues for future reaserch. *Int.J.Organ. Anal.*, 29(3), 603-628.

Adham, Tawfig Khidir Ibnouf; and Sukkkar, Amr (2024).Investigating the influence of organizational culture on team management: exploring effective factors and techniques.*World J.Adv. Res.*, 22(1), 1684-1702.

Adidam, P.T. and Bingi, R.P. (2000). The Importance of Decision Confidence to Strategy Outcomes. *The Journal of Applied Business Research*, 16(2), 35-50.

Amason, A.C. (1996). Distinguishing the Effects of Functional and Dysfunctional Conflict on Strategic Decision Making: Resolving A Paradox for Top Management Teams. *Academy of Management Journal,* 39(1), 123-148.

Andreev, P.; Heart, T.; Maoz, H.; and Pliskin, N. (2009). *Validating Formative Partial Least Squares (PLS) Models: Methodological Review and Empirical Illustration*. Proceedings of Thirtieth International Conference on Information Systems. Phoenix, Arizona, ICIS

Bantel, K.A.; and Jackson, S.E. (1989). Top Management and Innovations in Banking: Does the Composition of the Top Team Make a Difference? *Strategic Management Journal*, 10, 107-124.

Baum, J.R.; and Wally, S.; (2003). Strategic Decision Speed and Firm Performance. *Strategic Management Journal*, 24 (11): 1107-1129.

Berscheid E.; and Walster E. (1978). *Interpersonal Attraction*. Reading, MA: Addison-Wesley.

Bollen, K.A.; and Lennox, R. (1991). Conventional Wisdom On Measurement: A Structural Equation Perspective. *Psychological Bulletin*, 110, 305-314.

Boone, C.; and Hendricks, W. (2009). Top Management Team Diversity and Firm Performance: Moderators of Functional-Background and Locus-of-Control Diversity. *Management Science,* 55(2), 165-180.

Bourgeois, L.J.; and Eisenhardt, K. (1988). Strategic Decision Processes in High Velocity Environments: Four Cases in the Microcomputer Industry. *Management Science*, 34, 816-835.

Bruhn, M.; Georgi, D; and Hadwich, K. (2008). Customer Equity Management as Formative Second Order Construct. *Journal of Business Research*, 61, 1292-1301.

Buyl, T.; Boone, C.; Hendriks, W.; and Matthyssens, P. (2011). Top Management Team Functional Diversity and Firm Performance: The Moderating Role of CEO Characteristics. *Journal of Management Studies*, 48(1),151-177.

Byrne D. (1971). *The Attraction Paradigm*. New York: Academic Press.

Chin, W.W. (1998). Issues and Opinion on Structural Equation Modeling. *Management Information Systems Quarterly*, 22,1.

Coltman, T.; Devinney, T.; Midgley, D.F.; and Venaik, S. (2008). Formative Versus Reflective Measurement Models: Two Applications of Formative Measurement. *Journal of Business Research*, 61, 1250 -1262.

Corner, P.D.; Kinicki, A.J.; and Keats, B.W. (1994). Integrating Organizational and Individual Information Processing Perspectives on Choice. *Organization Science*, 5(3), 294-308.

Cycyota, C.S.; and Harrison, D.A. (2006). What (Not) to Expect When Surveying Executives. A Meta-Analysis of Top Manager Response Rates and Techniques Over Time. *Organizational Research Methods*, 9 (2), 133-160.

Cyert, R.M.; and March, J.G. (1963). *A Behavioral Theory of the Firm*. Englewood Cliffs, NJ.: Prentice-Hall.

Dangelo, M. (2005). *Innovative Relevance: Realigning the Organization for Profit*. iUniverse.

Dess, G.G. (1987). Consensus on Strategy Formulation and Organizational Performance: Competitors in a Fragmented Industry. *Strategic Management Journal*, 8(3), 259-277.

Diamantopoulos, A.; and Siguaw, J. A. (2006). Formative Versus Reflective Indicators In Organizational Measure Development: A Comparison and Empirical Illustration. *British Journal of Management*, 17, 263.

Diamantopoulos, A.; and Winklhofer, H .(2001). Index Construction with Formative Indicators: An Alternative to Scale Development. *Journal of Marketing Research*, 37, 269–277.

Dillman, D. (2000). *Mail and Internet Surveys: The Tailored Design Method*. Wiley: New York.

Doll, W.J.; Xia, W.; and Torkzadeh, G. (1994). A Confirmatory Factor Analysis of the End-User Computing Satisfaction Instrument. *MIS Quarterly*, 18:4, 453-461.

Dooley R.S.; Fryxell, G.E.; and Judge, W.Q. (2000). Belaboring the Not-So-Obvious: Consensus, Commitment, and Strategy Implementation Speed and Success. *Journal of Management*, 26 (6), 1237-1257.

Dooley, R.S.; and Fryxell, G.E. (1999). Attaining Decision Quality and Commitment from Dissent: The Moderating Effects of Loyalty and Competence in Strategic Decision-Making Teams. *Academy of Management Journal*, 42(4), 389-402.

Duchek, S.; Raetze S.; and Scheuch I. (2020). The role of diversity in organizatioanl resilience: a theoretical framework. *Bus. Res.*, 13(2), 387-423.

Eisenhardt, K.M. (1989). Making Fast Strategic Decisions in High velocity Environments. *Academy of Management Review*, 32(3), 543-576.

Eisenhardt, K.M.; and Schoonhoven, C.B. (1990). Organizational Growth: Linking Founding Team, Strategy, Environment, and Growth Among U.S. Semiconductor Ventures 1978-1988. *Administrative Science Quarterly*, 35, 504-529.

Eisenhardt, K.M.; and Zbaracki, M.J. (1992). Strategic Decision Making. *Strategic Management Journal*, 13, Special Issue: Fundamental Themes in Strategy Process Research, 17-37.

Ferrier, W.J.; and Lyon, D.W. (2004). Competitive Repertoire Simplicity and Firm Performance: The Moderating Role of Top Management Team Heterogeneity. *Managerial and Decision Economics*, 25(6/7), 317-327

Freeze, R. D.; and Raschke, R. L. (2007). *An Assessment of Formative and Reflective Constructs in IS Research*. European Conference of Information Systems, St. Gallen, Switzerland.

Galbraith, J.R. (1973). *Designing Complex Organizations*. Reading, MA: Addison-Wesley.

Hage, J. (1980). *Theories of Organizations: Form, Process and Transformation*. New York: Wiley.

Haleblian, J.; and Finkelstein, S. (1993). Top Management Team Size, CEO Dominance, and Firm Performance: The Moderating Roles of Environmental Turbulence and Discretion. *Academy of Management Journal*, 36(4), 844-863.

Hambrick, D.C.; and Mason, P.A. (1984). Upper Echelons: The Organization as a Reflection of Its Top Managers. *Academy of Management Review*, 9(2), 193-206.

Hickson, D.; Butler, R.; Cray, D.; Mallory, G.; and Wilson, D. (1986). *Top Decisions: Strategic Decision Making in Organizations*. San Francisco: Jossey-Bass.

Hofstede, G. (2001). *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations (2nd ed.)*. Thousands Oaks, CA: Sage.

Homburg, C.; Krohmer, H.; and Workman, Jr., J.P. (1999). Strategic Consensus and Performance: The Role of Strategy Type and Market-Related Dynamism. *Strategic Management Journal*, 20(4), 339-357.

Jackson, S.E.; and Joshi, A. (2001). Research on Domestic and International Diversity in Organizations: A Merger That Works?. Pada N. Anderson, D. Ones, H. Sinangil and C. Visweswaran (Eds.). *Handbook of Work and Organizational Psychology*. London: Sage, 206-231.

Jackson, S.E.; Joshi, A.; and Erhardt, N.L. (2003). Recent Research on Team and Organizational Diversity: SWOT Analysis and Implications. *Journal of Management*, 29(6), 801–830.

Jackson, S.E.; Joshi, A.; and Erhardt, N.L. (2003). Recent Research on Team and Organizational Diversity: SWOT Analysis and Implications. *Journal of Management*, 29(6), 801–830.

Judge, W.Q.; and Miller, A. (1991). Antecedents and Outcomes of Decision Speed in Different Environmental Contexts. *Academy of Management Journal*, 34(2), 449-463.

Kauer, D.; Waldeck, T.C.P.; and Schaffer, U. (2007). Effects of Top Management Team Characteristics on Strategic Decision Making: Shifting Attention to Team Member Personalities and Mediating Processes. *Management Decision*, 45(6), 942-967.

Kellermanns, F.W.; Walter, J.; Floyd, S.W.; Lechner, C.; and Shaw, J.C. (2011). To Agree or Not to Agree? A Meta-analytical Review of Strategic Consensus and Organizational Performance. *Journal of Business Research*, 64, 126-133.

Kim, W.C.; and Mauborgne, R. (1997). Fair Process: Managing in the Knowledge Economy. *Best of Harvard Business Review*.

Knight, D.; Pearce, C.L.; Smith, K.G.; Olian, J.D.; Sims, H.P.; Smith, K.A.; and Flood, P. (1999). Top Management Team Diversity, Group Process, and Strategic Consensus. *Strategic Management Journal*, 20, 445-465.

Kownatzki, M. (2002). *The Speed of Strategic Decision-Making and the Impact of Corporate Involvement at the SBU-Level. Doctoral Dissertation*, Universität St. Gallen, Switzerland.

Kreitner, R. (2001). *Management, 8th ed*. Boston: Houghton Mifflin.

Kreitner, R.; and Kinicki, A. (2007). *Organizational Behavior. 7th Ed*. New York: McGraw-Hill.

MacKenzie, S.B.; Podsakoff, P.M.; and Jarvis, C.B. (2005). The Problem of Measurement Model Misspecification in Behavioral and Organizational Research and Some Recommended Solutions. *Journal of Applied Psychology*, 90 (4), 710-730.

March, J.G.; and Simon, H.A. (1958). *Organizations*. New York: Wiley.

Miller, C.C.; Burke, L.M.; and Glick, W.H., (1998). Cognitive Diversity among Upper-Echelon Executives: Implications for Strategic Decision Processes. *Strategic Management Journal*, 19(1), 39-58.

Milliken F.J.; and Martins L.L. (1996). Searching for Common Treads: Understanding the Multiple Effects of Diversity in Organizational Groups. *Academy of Management Journal*, 21, 402-433.

Milliken F.J.; and Martins L.L. (1996). Searching for Common Treads: Understanding the Multiple Effects of Diversity in Organizational Groups. *Academy of Management Journal*, 21, 402-433.

Mintzberg, H.A. (1979). Organizational Power and Goals: a Skeletal Theory. Pada D.E. Schendel and C. Hofer (Eds). *Strategic Management*. Boston, MA: Little, Brown and Co., 64-80.

Mintzberg, H.A.; Raisinghani, D.; and Theoret, A. (1976). The Structure of Unstructured Decision Processes. *Administrative Science Quarterly,* 31,365-388.

Mosakowski, E. (1997). A Resource Based Perspective on the Dynamic Strategy-performance Relationship: An Empirical Examination of the Focus and Differentiations Strategies in Entrepreneurial Firms. *Journal of Management,* 19, 819-839.

Nadkarni, S.; and Narayanan, V.K. (2007). Strategic Schemas, Strategic Flexibility, and Firm Performance: The Moderating Role of Industry Clockspeed. *Strategic Management Journal*, 28: 243–270.

Nunnally, J.C.; and Bernstein, I.H. (1994). *Psychometric Theory*. New York: McGraw-Hill.

O'Reilly, C.A.; Caldwell, D.F.; and Barnett, W.P. (1989). Work Group Demographics, Social Integration and Turnover. *Administrative Science Quarterly*, 3(4), 21-37.

O'Reilly, C.A.; Caldwell, D.F.; and Barnett, W.P. (1989). Work Group Demographics, Social Integration and Turnover. *Administrative Science Quarterly*, 3(4), 21-37.

O'Reilly, C.A.; Snyder, R.C., and Boothe, J.N. (1993). Effects of Executive Team Demography on Organizational Change. Dalam G. Huber and W. Glick (eds), *Organizational Change and Redesign: Ideas and Insights for Improving Performance*. New York: Oxford University Press, 147-175.

O'Reilly, C.A.; Snyder, R.C., and Boothe, J.N. (1993). Effects of Executive Team Demography on Organizational Change. Dalam G. Huber and W. Glick (eds), *Organizational Change and Redesign: Ideas and Insights for Improving Performance*. New York: Oxford University Press, 147-175.

Oberman, R.; Dobbs, R.; Budiman, A.; Thompson, F.; and Rosse, M. (2012). *The archipelago economy: Unleashing Indonesia's potential*. McKinsey Global Institute.

Parayitam, S.; Olson, B.J.; and Bao, Y. (2010). Task Conflict, Relationship Conflict and Agreement-Seeking Behavior in Chinese Top Management Teams. *International Journal of Conflict Management*, 21(1), 94-116.

Perlow, L.A.; Okhyusen, G.A.; and Repenning, N.P. (2002). The Speed Trap: Exploring the Relationship between Decision Making and Temporal Context. *The Academy of Management Journal*, 45(5), 931-955.

Petter, S.; Straub, D; and Rai, A. (2007). Specifying Formative Constructs in Information Systems Research. *MIS Quarterly,* 31(4), 623-656.

Pettigrew, A.M. (1992). On Studying Managerial Elites. *Strategic Management Journal*, 13, Special Issue: Fundamental Themes in Strategic Process Research, 163-182.

Pitcher, P.; and Smith, A.D. (2001). Top Management Team Heterogeneity: Personality, Power, and Proxies. *Organization Science*, 12(1), 1-18.

Rajagopalan, N.; Rasheed, A.M.A.; and Datta, D.K. (1993). Strategic Decision Processes: Critical Review and Future Directions. *Journal of Management,* 19(2), 349-384.

Ringle, C.M.; Wende, S.; and Will, S. (2005). *SmartPLS 2.0 (M3) Beta*. Hamburg, available at http://www.smartpls.de. (Accessed 15 June 2014)

Roberto, M.A. (2004). Strategic Decision-Making Processes: Beyond the Efficiency-Consensus Trade-Off. *Group & Organization Management*, 29(6), 625-658.

Rossiter, J., 2002. The C-OAR-SE Procedure for Scale Development in Marketing. *International Journal of Research in Marketing*. 19(4), 305-335.

Schweiger, D.M.; and Sandberg, W.R. (1991). The Team Approach to Making Strategic Decisions. Pada H. G. Glass (Ed.). *Handbook of business strategy*. Boston: Warren, Gorham and Lamont, 1-20.

Simons, T.; Pelled, L.H.; and Smith, K.A. (1999). Making Use of Difference: Diversity, Debate, and Decision Comprehensiveness in Top Management Teams. *Academy of Management Journal*, 42(6), 662-673.

Smith, K.G.; Smith, K.A.; Olian, J.D.; Sims, H.P.; OBannon, D.P.; and Scully, J.A. (1994). Top Management Team Demography and Process: The Role of Social Integration and Communication. *Administrative Science Quarterly*, 39, 412-438.

Smith, K.G.; Smith, K.A.; Olian, J.D.; Sims, H.P.; OBannon, D.P.; and Scully, J.A. (1994). Top Management Team Demography and Process: The Role of

Social Integration and Communication. *Administrative Science Quarterly*, 39, 412-438.

Sniezek, J.A. (1992). Groups Under Uncertainty: An Examination of Confidence in Group Decision Making. *Organizational Behavior and Human Decision Processes*, 52, 124-155.

Stan, V.; and Saporta, G. (2005). Customer Satisfaction and PLS Structural Equation Modeling. An Application to Automobile Market. *Conservatoire National des Arts et Metiers*.

Stevenson, H.; and Gumpert, D. (1985). The Heart of Entrepreneurship. *Harvard Business Review*, 63(2), 85-94.

Stahl, G.K.; and Maznevski, M. L. (2021). Unraveling the effects of cultural diversity in teams: A retrospective of research on multicultural work groups and an agenda for future reasearch. *J. Int. Bus. Stud.*, 52(1), 4-22.

Straub, D.; Boudreau, M.C.; and Gefen, D. (2004). Validation Guidelines For IS Positivist Research. *Communications of the Association for Information System*, 13, 380-427.

Su, Z.; Chen, J.; Guo, H.; and Wang, D. (2022). Top management team's participative decision-making, heterogeneity, and management innovation: an information processing perspective. *Asia Pacific J. Manag.*, 39(1), 149-171.

Tacheva, S. (2007). *Top Management Team Diversity: A Multilevel Exploration of Antecedents and Consequence*. Dissertation, University of St. Gallen, Switzerland.

Tajfel H. (1982). *Human Groups and Social Categories: Studies in Social Psychology*. Cambridge: Cambridge University Press.

Talaulicar, T.; Grundei, J.; and V. Werder, A. (2005). Strategic Decision Making in Start-Ups: The Effect of Top Management Team Organization and Processes on Speed and Comprehensiveness. *Journal of Business Venturing*, 20, 519-541.

Tenenhaus M.; Amato S.; and Vinzi, E.V. (2004). *A Global Goodness-of-fit Index for PLS Structural Equation Modeling*. Proceedings of the XLII SIS Scientific Meeting, Vol. Contributed Papers, CLEUP, Padova, 739-742.

Turner J. (1982). Toward a Cognitive Definition of The Group. Pada Tajfel H. *Social Identity and Intergroup Relations*. Cambridge: Cambridge University Press.

Vinzi, V.E.; Trinchera, L.; and Amato, S. (eds.). (2010). *Handbook of Partial Least Square - Springer Handbooks of Computational Statistics*. Berlin, Heidelberg: Springer-Verlag.

Vroom, V.; and Yetton, P. (1973). *Leadership and Decision Making*. Pittsburgh, Pa.: University of Pittsburgh Press.

Wally, S.; and Baum, J.R. (1994). Personal and Structural Determinants of the Pace of Strategic Decision Making. *Academy of Management Journal*, 37(4), 932-956.

West, C.T.; and Schwenk, C.R. (1996). Top Management Team Strategic Consensus, Demographic Homogeneity and Firm Performance: A Report of Resounding Non-findings. *Strategic Management Journal*, 17, 571-576.

Wieserma, F. M.; and Bantel, K.A. (1992). Top Management Team Demography and Corporate Strategic Change, *The Academy of Management Journal*, Vol. 35, No. 1 (Mar., 1992), pp. 91-121

Wieserma, F. M.; and Bantel, K.A. (1992). Top Management Team Demography and Corporate Strategic Change, *The Academy of Management Journal*, Vol. 35, No. 1 (Mar., 1992), pp. 91-121

Wooldridge, B.; and Floyd, S.W. (1990). Strategic Process Effects on Consensus. *Strategic Management Journal*, 10: 295-302.

Wooldridge, B.; and Floyd, S.W. (1990). Strategic Process Effects on Consensus. *Strategic Management Journal*, 10: 295-302.

Wu, J.; Richard, O.C.;Triana, M. Del C.; and Zhang, X (2022). The performance impact of gender diversity in the top management team and board of directors: A multiteam systems approach. *Hum. Resour. Manage.*, 61(2), 157-180.

Yang, M. (2010). Consensus and Single Leader Decision-Making in Teams Using Structured Design Methods. *Design Studies*, 31(4), 345-362.