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Does information sharing always improve team decision making? An examination of the hidden profile condition in new product development☆

Yazhen Xiao [a,1,2], Haisu Zhang [b,*,2], Timothy M. Basadur [c,3]

[a] Department of Managerial Studies, University of Illinois at Chicago, 601 S Morgan St. UH2332, M/C 243, Chicago, IL 60607, United States
[b] School of Management, New Jersey Institute of Technology, University Heights, Newark, NJ 07102, United States
[c] Concordia University Chicago, College of Business, Krauss Hall, #215, 7400 Augusta St., River Forest, IL 60305-1402, United States

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ABSTRACT

This research examines the effects of information sharing and information use on team decision making. While past studies are based on an implicit assumption that information sharing always leads to information use and optimal decision outcomes, the authors argue that this assumption is applicable only when information is equally distributed among decision makers in a team. By adopting the hidden profile paradigm, the authors suggest that when information is unequally distributed, information sharing does not facilitate optimal decision making. In the meantime, they find that team functional diversity is a main factor worsening the hidden profile situation—that is, when decision makers are diverse in terms of their functional backgrounds, the facilitating effect of information sharing decreases. Results indicate that information use, rather than information sharing, is the ultimate gateway that leads decision makers to optimal decision outcomes.

> Team members frequently discuss the information that they are aware of…and fail to seek unique information from others. That dysfunctional pattern undermines the very reason that organizations form diverse teams. (Bazerman & Chugh, 2006, p. 96)

1. Introduction

A well-recognized advantage of teamwork is the combined pool of information shared by team members in the decision making process (e.g. Mesmer-Magnus & DeChurch, 2009; Troy, Hirunyawipada, & Paswan, 2008). To realize such an advantage requires team members to effectively share and further collectively use the information. While information sharing is often viewed as a critical facilitator for team decision making, a number of empirical studies suggest that it may not be as impactful as supposed under certain circumstances (e.g. Henard & Szymanski, 2001; Larson, 2009; Stasser & Titus, 1985). Given the importance of better understanding managerial decision making, exploration on when and why such inconsistency exists is vital and meaningful.

Prior decision making research is often based on an implicit assumption that the sharing of information necessarily results in the actual use of that information. Empirical evidence in this research suggests that this assumption is not always applicable. Specifically, we endorse the assumption that information sharing leads to information use when information is equally distributed among team members—that is, they possess the same set of information. However, we challenge this assumption when information is unequally distributed—that is, they possess different information. When team members hold their own information (i.e. unique information) in addition to overlapping information (i.e. common information), they often focus on common but not unique information (e.g. Lightle, Kagel, & Arkes, 2009; Toma & Butera, 2009). In such a situation, information sharing is unlikely to serve as a catalyst for optimal decision making (Larson, 2009; Mojzisch & Schulz-Hardt, 2010). This study compares the two conditions, equal information distribution (EID) and unequal information distribution (UID), addresses the question of when and why information sharing gains or loses its impact on team decision making, and meanwhile calls for attention to the role of the actual use of information for team decisions.

Adopting the hidden profile paradigm (e.g. Larson, 2009; Lightle et al., 2009; Lu, Yuan, & McLeod, 2012; Mojzisch & Schulz-Hardt, 2010), we examine relationships among information sharing, information use,

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* Corresponding author. Tel.: +1 973 596 3248.
E-mail addresses: yxiao21@uic.edu (Y. Xiao), hzhangnpd@gmail.com (H. Zhang), Timothy.Basadur@cuchicago.edu (T.M. Basadur).
[1] Tel.: +1 773 669 5587.
[2] The first two authors equally contributed to this article.
[3] Tel.: +1 708 209 3016.

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and team decision outcomes, and argue that information sharing does not ensure optimal decisions. The hidden profile is a phenomenon where each team member possesses common information and also his or her own unique information. Under this circumstance, teams prioritize common information over unique information in the decision making process, which in turn leads to suboptimal decision outcomes (Lightle et al., 2009; Stasser & Titus, 1985). The hidden profile has been documented in real-world business practice where information is unequally distributed among team members due to their different information sources, expertise, knowledge, education, training, and so forth. For example, new product development teams in high-technology industries over-rely on common information and making "safe" decisions devoid of new insights and vision (Jassawalla & Sashittal, 2000).

Moreover, firms often adopt functionally diverse teams for decision making. This type of team is credited for providing various knowledge and supposedly fostering decision quality (Qiu, Qualls, Bohlmann, & Rupp, 2009). For example, in cross-functional new product development teams of John Deere (a leading manufacturer of agricultural machinery), marketing and technology staff work together in order to collect customer insights and then use them to improve the technical design of new products (Cable, 2008). Despite merits of the cross-functional team discussed in extant literature, its dark side, such as narrow focus on own background knowledge (Bazerman & Chugh, 2006) and inconsistent opinions on best solutions (Cronin & Weingart, 2007), could aggravate the hidden profile problem. In line with this view, we argue that functional diversity easily harbors the hidden profile because teammates have unique information that is not owned by others and only common information serves as a base of social validation (Phillips, Mannix, Neale, & Gruenfeld, 2004). In this regard, functional diversity distracts the team's attention to unique information even more dramatically, and negatively moderates the relationship between information sharing and unique information use. When information is equally distributed to team members, however, team functional diversity will not hurt team decision outcomes because it is easy for a team to socially validate all information and make optimal decisions.

In summary, we contend that the ultimate factor that alters team decisions is information use rather than information sharing. While information sharing has been underlined as an important stream of business research, we question the effectiveness of information sharing and suggest that sharing unique information in hidden profile does not warrant actually using that information. Accordingly, we compare the relationships of information sharing, information use, and decision outcomes between two information distribution conditions: EID vs. UID. Our conceptual framework is displayed in Fig. 1.

Manipulating the two conditions in our experiment of new product decision making, we find that in the EID condition, information sharing affects decision outcomes and this relationship is fully mediated by information use. In the UID condition, although information use affects decision outcomes, information sharing and decision outcomes are *not* related. While taking team functional diversity into consideration, we found that the situation becomes worse. This study provides valuable insights into the prism of team decision making, underlining the fact that information sharing does not always improve team decisions. Managers form cross-functional teams based on the delusion that uniquely held information by each team member will lead to better decision outcomes. We suggest that this is not necessarily the case.

2. Theory and hypothesis

2.1. Team decisions in equal information distribution (EID)

Information sharing is the attempt that team members deliberately and consciously make to mention information related to decision making (Parayitam & Dooley, 2009). It has been viewed as a critical antecedent of decision outcomes in academic research and corporate practice (Mesmer-Magnus & DeChurch, 2009; Neilson, Martin, & Powers, 2008). However, close scrutiny of past empirical studies reveals rather mixed results. In a study of new product development teams, Henard and Szymanski (2001) find that information sharing across different functions is not correlated with better team decisions. Frishammar

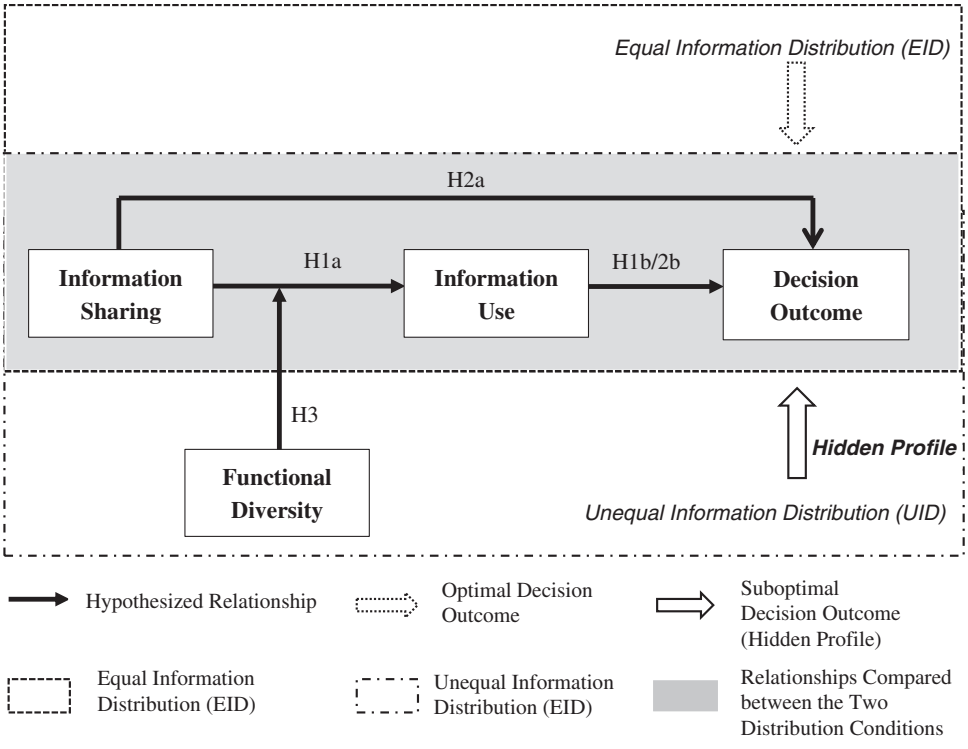

Fig. 1. Conceptual model.

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