RAJESH SETHI, DANIEL C. SMITH, and C. WHAN PARK*

Multiple studies have found that the primary determinant of new product failure is an absence of innovativeness—the extent to which a new product provides meaningfully unique benefits. Given the persistence of this finding and the growing use of cross-functional teams in new product development projects, the authors examine how innovativeness is affected by various characteristics of cross-functional teams and contextual influences on the team. On the basis of a study of 141 cross-functional product development teams, the authors find that innovativeness is positively related to the strength of superordinate identity in the team, encouragement to take risk, customers’ influence, and active monitoring of the project by senior management. Beyond a moderate level, social cohesion among team members has a negative effect on innovativeness. The effect of superordinate identity on innovativeness is strengthened by encouragement to take risk and weakened by social cohesion. Functional diversity has no effect on innovativeness. The authors discuss managerial and research implications of the findings.

Cross-Functional Product Development Teams, Creativity, and the Innovativeness of New Consumer Products

Considerable effort has been dedicated to understanding the determinants of new product success and failure. In a comprehensive review of this work, Crawford (1977) and, more recently, Cooper (1993, 1996) find that an absence of innovativeness (i.e., product benefits that are unique to a given product and are perceived as meaningful by customers) is an important underlying explanation for new product failure. However, despite all the attention devoted to improving new product development practice, in many firms, the development of innovative products tends to be the exception rather than the rule (Cooper 1996).

Given the history of evidence and the current state of practice, it is somewhat surprising to find an absence of research examining factors that affect new product innovativeness. There exists a large body of research on the determinants of organization-level innovation (e.g., Deshpandé, Farley, and Webster 1993; Kanter 1988; Zaltman, Duncan, and Holbeck 1973; Zangwill 1993). This work focuses on the determinants of the volume or the rate of new product development, an organization’s ability to implement major new product initiatives, a company’s tendency to be a late or an early entrant to markets, the rate at which firms adopt new technologies, and so forth. Understanding factors affecting innovativeness at the product development project level will provide a valuable complement to this body of work (Brown and Eisenhardt 1995).

Furthermore, this innovation research mainly studies the effects of various macro, firm-level independent variables (e.g., structural and cultural factors). However, as firms are becoming more conscious about product development cycle time, they are seeking ways to improve the effectiveness of new product development projects (Clark and Fujimoto 1991; Eisenhardt and Tabrizi 1995; Takeuchi and Nonaka 1986). The knowledge generated by research on the effects of macro, firm-level variables provides limited explanation of variations in project-level outcomes. Indeed, within a given firm (i.e., within a given structure and culture), there is often considerable variation in outcomes of the new product development projects. To enable managers to improve critical project outcomes such as product innovativeness, it
is important to understand how project-level factors affect these outcomes.

One important project-level factor is the way firms organize new product development projects. Specifically, firms are increasingly entrusting product development to cross-functional teams, which consist of members from several functional areas such as marketing, engineering, manufacturing, and purchasing (Olson, Walker, and Ruekert 1995). Therefore, the focus of our research is the effects of various aspects of cross-functional teams on new product innovativeness.

Innovativeness presumes a degree of creativity in the new product ideation and design processes. Research in the areas of social psychology of creativity and group psychology suggests that internal dynamics in a team and the resulting creative outcome can be affected by the characteristics of the team and its immediate context (Amabile 1988; King and Andersen 1990). Accordingly, we consider variables related to each of these factors. Regarding team factors, we focus on the physical composition of the team (functional diversity) and psychological bonds (superordinate identity and social cohesion). For contextual influences on the team, we study the effect of monitoring of the project by senior management, encouragement given to the team to be venturesome, and customers’ influence on decisions made during new product development.

It is worth noting that certain organizational factors (such as structure, process, and culture) and market factors (e.g., competitive pressure) also can influence the outcome of a product development team. However, because ours is one of the first attempts at examining how cross-functional teams affect new product innovativeness, we limit the focus of this research to studying the effects of factors related to the team and the immediate context around the team. Nonetheless, we include several important organizational and market factors as covariates in the model to examine how team factors influence innovativeness when the effect of such nonteam factors is taken into account.

Focusing on the extent to which the characteristics of cross-functional teams and contextual influences affect new product innovativeness makes several contributions to both marketing practice and theory. For example, as a practical matter, because we are considering variables that can be influenced by managers, the findings of our study should provide clear recommendations that are directly related to enhancing new product innovativeness, an important underlying explanation for new product success/failure. Considering that some of these variables may adversely affect team creativity, it is particularly useful to examine whether factors managers use when forming teams enhance or undermine new product innovativeness.

In terms of theory, innovation research has focused on organizational-level antecedents and outcomes. Our study extends this work to the project level. Specifically, the effectiveness of new product development projects often is hindered by subtle and deeply rooted biases and stereotypes that project members from various functional areas hold toward one another (Ashforth and Mael 1989; Dougherty 1992). Drawing on social identity research, we develop an approach to understanding and overcoming such biases and stereotypes and thereby enhancing project-level outcomes such as new product innovativeness.

In the next section, we develop the conceptual underpinnings of our study, which in turn support the selection of the specific variables on which we focus. We then discuss our hypotheses, describe the method used to test them, and present our results.

**CONCEPTUAL BACKGROUND**

**Construing New Product Innovativeness**

As noted previously, a primary determinant of new product success is the extent to which the product is different from competing alternatives in a way that is valued by customers. This notion of “meaningful uniqueness” provides the foundation for our definition of new product innovativeness and is consistent with several branches of literature that use the term. For example, research on the social psychology of creativity suggests that for an outcome to be innovative it must be novel and appropriate (Amabile 1983; Jackson and Messick 1965). Novelty, in turn, refers to the extent to which a concept, idea, or object differs from conventional practice within the domain of interest. Appropriateness is the extent to which a given output is viewed as useful or beneficial to some audience (Jackson and Messick 1965). Recently, a similar construal of innovativeness as meaningful novelty has been applied in the context of marketing programs for mature products (Andrews and Smith 1996). So, as used here, new product innovativeness refers to the extent to which the product differs from competing alternatives in a way that is meaningful to customers.

**Antecedents of New Product Innovativeness**

Research on creativity and the creative process provides the starting point for identifying specific variables likely to affect new product innovativeness. According to this stream of research, there are six key conditions that are considered essential for the emergence of a creative outcome and that are relevant to the present study. First, it is generally recognized that the likelihood of producing innovative ideas improves as the diversity of input brought to bear on a problem increases (i.e., diversity of input condition). Second, innovative ideas typically are the result of finding novel relationships among diverse ideas and perspectives (i.e., discovery of novel linkages condition; Amabile 1983; Osborn 1963). Third, innovative ideas are an outcome of an extended effort focused on a well-defined problem (Hogarth 1980). As such, motivation to perform a given task is a fundamental predictor of the innovativeness of the outcomes of the task (i.e., motivation to innovate condition; Amabile 1983; Andrews and Smith 1996). Fourth, innovative ideas emerge from a nonroutine, as opposed to an algorithmic, problem-solving approach (Amabile 1983; Andrews and Smith 1996). Therefore, discovery of innovative ideas is facilitated if traditional perspectives and the routine ways of doing things are freely challenged (i.e., challenging traditional perspectives condition). Fifth, innovative ideas, by their very definition, deviate from the status quo and therefore not only engender a degree of risk but also may trigger defensive reactions in others (Hogarth 1980; Osborn 1963). Therefore, the possibility of discovering novel linkages is enhanced if there exists an atmosphere that promotes risk taking (i.e., promoting risk taking condition; Slater and Narver 1995). Sixth, after coming up with creative ideas, the next critical process is the successful implementation of these ideas, which requires that necessary resources and
facilities be available in a timely manner (i.e., resource availability condition; Kanter 1983).

These six conditions provide the basic conceptual foundation on which we build our model of new product innovativeness. Specifically, we identify variables related to the characteristics of the team and contextual influences on the team that are expected to play a critical role in giving rise to these conditions (Table 1 and Figure 1).

Team characteristics. Cross-functional teams can be viewed in terms of their (1) physical composition and (2) psychological characteristics (i.e., how members of the team relate to the team and to one another). Regarding the former, we focus on functional diversity within the team. Although a large diversity of functional perspectives is generally viewed as a favorable team characteristic, such diversity can increase decision-making difficulty (Ancona and Caldwell 1992; Milliken and Martins 1996). This difficulty can lead to a more algorithmic decision-making process that is detrimental to creativity.

Regarding psychological characteristics, one variable we consider, superordinate identity, refers to the extent to which members identify with the team (rather than merely with their functional areas) and perceive a stake in the success of the team (Mackie and Goethals 1987; Sethi 2000; Tajfel 1982). This variable is expected to play a critical role in cross-functional teams because it can influence integration of diverse perspectives. Normally, such integration is difficult to achieve in cross-functional settings because people from different functional areas hold biases and stereotypes toward one another. These biases and stereotypes to a large extent arise from deeply rooted functional identities that people hold (Ashforth and Mael 1989; Mackie and Goethals 1987; Tajfel 1982). Unless functional identities are replaced by a sense of team identity, it may be difficult for members in a team to discover critical novel linkages among diverse perspectives.

Social identity research suggests that the adverse effect of functional identities can be mitigated if the members of a team who previously belonged to groups that hold biases and stereotypes against one another develop a strong sense of team identity (Brewer and Miller 1984; Sethi 2000). From a cognitive perspective, in a high superordinate identity team, the former interfunctional boundaries become weak, and instead a new, inclusive team-based boundary becomes important in the minds of members, which reduces the adverse effect of functional identities and orientations (Brewer and Miller 1984). Considering the promising role team identity can play, it is important to examine how superordinate identity in a cross-functional team affects innovativeness.2

Another aspect of how members relate to the team, social cohesion, is more affective and refers to the strength of interpersonal ties among team members (Hogg 1992; Zaccaro and McCoy 1988). Although social cohesion has the potential to adversely influence some of the conditions

1Although some researchers have used a concept such as "superordinate goal," there is little commonality between this concept and superordinate identity. Superordinate goal refers to an outcome that is not specific to any members or their functional areas but is related to the overall team or the team's task (Mackie and Goethals 1987, Sherif and Sherif 1969). Such an outcome is normally imposed on the team. Whereas superordinate goal refers to an overarching outcome, superordinate identity is essentially a cognitive state in which members have a perception of oneness with the team instead of merely viewing themselves as representatives of a functional area. Superordinate identity and superordinate goal are related in that the former can facilitate both the acceptance and achievement of the latter by team members (Mackie and Goethals 1987).

2Superordinate identity is similar in spirit to a recently proposed concept of relative functional identification that refers to the extent to which members feel a sense of connection with their function rather than with their organization (Fisher, Maltz, and Jaworski 1997). The difference between the two constructs, however, is that though superordinate identity is a group-level concept that captures the extent to which team-based identity overrides the functional identities of members, relative functional identification has been conceptualized at the organization level and relates to the tension between functional and organizational identification.

<table>
<thead>
<tr>
<th>Conditions for Creativity</th>
<th>Related Variables in the Model</th>
<th>Variable Type</th>
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<tbody>
<tr>
<td>1 Diversity of input</td>
<td>1 Number of functional areas</td>
<td>1 Team factor</td>
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<td></td>
<td>2 Customers' influence</td>
<td>2 Contextual influence</td>
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<td></td>
<td>3 Ease of communication in the firm</td>
<td>3 Covariate</td>
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<td></td>
<td>4 Project manager's operating style</td>
<td>4 Covariate</td>
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<tr>
<td>2 Discovery of novel linkages</td>
<td>1 Superordinate identity</td>
<td>1 Team factor</td>
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<td></td>
<td>2 Social cohesion</td>
<td>2 Team factor</td>
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<td></td>
<td>3 Functional diversity</td>
<td>3 Team factor</td>
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<td></td>
<td>2 Project monitoring by senior management</td>
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<td></td>
<td>3 Extent of competition among new products</td>
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<tr>
<td></td>
<td>2 Resource availability</td>
<td>2 Covariate</td>
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Table 1
CONDITIONS FOR CREATIVITY AND VARIABLES IN THE MODEL
for creativity (e.g., integration of diverse functional perspectives to discover novel ideas, challenging of functional perspectives), it is not well understood how this variable will affect new product innovativeness. More critically, prior research on social cohesion has been done with groups in which members come from the same background and have similar perspectives. It is not known what type of effect social cohesion will have in teams in which members from different functional areas come to the team with attendant biases and stereotypes toward one another.

Contextual influences on the team. We consider three contextual influences on the team that can play an important role in creating conditions that affect creativity. The first is the extent of project monitoring by senior management. Senior management’s close monitoring of the project can provide a signal of the importance of a given project, which in turn is expected to affect the team’s motivation level and aid in garnering resources from individuals/units outside the team (Andrews and Smith 1996; Gupta, Raj, and Wilemon 1986; Kanter 1988). However, very close senior management monitoring can have a downside, as teams can view such monitoring as interference, which may adversely affect their motivation.

The second contextual influence on the team is the extent to which the team is encouraged to take risk. Such encouragement could be the result of senior managers urging the team to be venturesome (either through verbal encouragement or by setting up a reward system that encourages risk taking) or could be due to an environment around the team that promotes a risk-taking orientation (Slater and Narver 1995). Encouragement to take risk affects the extent to which new product development teams deviate from routine problem-solving approaches and feel comfortable pursuing untried ideas, a crucial factor for the emergence of innovativeness (Amabile 1988; Andrews and Smith 1996). It is particularly important to examine whether this variable affects innovativeness, because many firms, in their search for improved quality through continuous improvement of existing products and processes, may implicitly discourage such risk taking, because it is likely to disturb the pursuit of incremental continuous improvement (Clark and Fujimoto 1991).

The third contextual influence on the team comes from customers. Teams that take customers’ views into account, at least during the initial part of the development process, can increase the diversity of ideas that are available to them during the idea/concept development and design stages. However, some researchers believe that customers cannot help much in the development of unique products, because they can provide only incremental ideas (Bennett and Cooper 1981). Given these conflicting views, it is important to investigate how customers’ influence affects innovativeness.

Covariates. Although in this study our interest is mainly with team factors, we have included several organizational and market factors as covariates that can influence new product outcomes. By including these variables, we can better identify the unique effects of team factors and contextual
influences on innovativeness. Also, some of the team
variables we consider may be confounded with other team vari-
ables not explicitly of interest in this study. When possible,
we have included these other team variables (which are
likely to create potential confounding) as covariates in the
model. The first covariate of interest is the general ease of
communication among functional areas at the firm level that
can help the team acquire a wide variety of diverse perspec-
tives from others in the firm and thereby have a positive
influence on innovativeness. Second, we account for the
effect of competition among new products in the target mar-
et: If team members are targeting a market in which com-
petitors are vigorously introducing new products, this can
help motivate the team to develop and launch a superior
product in such a market. Third, if the reward structure in the
firm is such that members involved in projects are rewarded
on the basis of the project’s overall performance rather than
for their performance on their respective functional tasks, it
is likely to enhance members’ motivation to strive for a
superior project outcome, which can improve product inno-
vativeness (Amabile 1983). Fourth, if the project manager
has an operating style that encourages members to partici-
pate actively in discussions related to the project, it can help
in the emergence of more diverse perspectives in the team as
well as increase the amount of questioning and challenging
of one another’s perspectives (Slater and Narver 1995)—the
conditions that can help in the development of innovative
products. Fifth, to help a team implement its creative ideas,
the organization must make adequate resources and facilities
available to the team. Therefore, resource availability can be
an important influence on product innovativeness. Sixth,
we account for the effect of team size, and thus we are better
able to get an estimate of the effect of functional diversity on
innovativeness.

THEORY AND HYPOTHESES

Characteristics of the Team

Superordinate identity. By nature, a low superordinate
identity team will be characterized by a retention of func-
tional identities, biases, and stereotypes. As a result, mem-
ers from one functional area may tend to overlook or reject
the information and perspectives of members from other
functional areas (Maltz and Kohli 1996). This problem is
aggravated by interdepartmental rivalry and political
maneuvering over scarce organizational resources (Friedkin
and Simpson 1985; Maltz and Kohli 1996; Ruekert and
Walker 1987). Consequently, members are unable to inte-
grate the information and perspectives of different func-
tional areas effectively (Jaworski and Kohli 1993; Slater and
Narver 1995). As such, teams with low superordinate iden-
ty are less likely to discover complex and novel linkages
among market needs, technology, and the company’s
resources.

In contrast, as noted previously, high superordinate iden-
tity in a team can override the adverse effects of functional
identities of team members (Brewer and Miller 1984;
Mackie and Goethals 1987; Sherif and Sherif 1969). High
superordinate identity enhances the perception of intrateam
similarities and leads to psychological acceptance of mem-
ers from other functional areas and their work methods,
thereby reducing the adverse effect of interfunctional biases
and stereotypes (Ashforth and Mael 1989; Mackie and
Goethals 1987; Sherif and Sherif 1969). In other words, a
feeling of psychological ownership of the project arises
among team members, which enhances cooperative behav-
As a result, members in such a team are more likely to inte-
grate a variety of diverse functional perspectives effectively
(Deshpandé and Zaltman 1982; Mackie and Goethals 1987).
Therefore,

$H_1$: The level of superordinate identity in a cross-functional
product development team is positively related to new prod-
uct innovativeness.

Social cohesion. Social cohesion is generally viewed by
managers as a desirable criterion for team formation. Some
level of social cohesion is necessary for the team to work
effectively. However, beyond a moderate level, social cohe-
sion is expected to have a negative effect on new product inno-
vativeness. This negative relationship can be explained on the
basis of the occurrence of groupthink, which often arises in
highly cohesive groups (Janis 1982). Groupthink refers to a
high level of concurrence seeking and conformance by mem-
bers of the group. Such behavior adversely affects the creativ-
ity of a team’s decisions, because it leads to an incomplete
survey of alternatives, poor information search, and selective
perception of information and alternatives (Janis 1982).

Although this discussion suggests a nonlinear relationship
between social cohesion and innovativeness, in our inter-
views at the outset of this study, we found that new product
development teams with extremely low levels of social cohe-
sion are rare (managers usually attempt to assemble
teams that will work well together). In other words, social
cohesion typically will be in the moderate-to-high range,
and thus we expect a negative relationship between social
cohesion and innovativeness. Therefore,

$H_2$: Beyond a moderate level, social cohesion is negatively
related to new product innovativeness.

Functional diversity. Team diversity refers to the number
of functional areas represented on the team whose members
are fully involved in the project. As the number of functional
areas represented on the team increases, so does the variety
of ideas and perspectives brought to the team. This, in turn,
increases the possibility of discovering novel linkages
(Milliken and Martins 1996; Osborn 1963). However, at
some point, the diversity of ideas can create information
overload, but because many of these perspectives are at odds
with one another, high diversity also makes it difficult to
resolve differences among perspectives (Olson, Walker, and
Ruekert 1995). To handle such problems, it is not uncom-
mon to find teams resorting to simplifying heuristics or
algorithmic problem solving (Andrews and Smith 1996; Van
de Ven 1986). As noted previously, such routine or algorithmic
problem solving is likely to reduce the ability of the team to
discover novel linkages (Amabile 1983).

This discussion suggests a nonlinear relationship between
functional diversity and innovativeness. As functional diver-
sity increases from a low to a moderate level, it enhances
innovativeness. However, when functional diversity goes
beyond a moderate level, it has a negative effect on innova-
tiveness. Therefore,

$H_3$: New product innovativeness will be highest at a moderate
level of functional diversity.
Contextual Influences on the Team

Encouragement to take risk. Innovative ideas, by definition, deviate from the status quo and thus engender a degree of risk for those who propose them (Kanter 1983; Osborn 1963). It is therefore not surprising to find that innovative ideas are more likely to arise in environments that encourage risk taking (Amabile 1988; Gupta, Raj, and Wilemon 1986). Unfortunately, even though the very involvement in new product development activity should motivate people to take risks, organizational systems and routines, in subtle ways, tend to make product development professionals avoid new ideas and approaches (Cygert and March 1963; Van de Ven 1986). For example, after the failure of the Edsel, the unwritten rule at Ford Motor Company was “not to break the mold.” As a result, although Ford product designers were the first to conceive of the contemporary (and very popular) minivan, the idea never went past the drawing board stage because it was considered inconsistent with the unwritten rule (Taylor 1994). However, when the same designers from Ford moved to Chrysler and received encouragement to pursue the idea in the face of great uncertainty, the minivan they developed turned out to be one of the most innovative and successful new products in the recent history of the automobile industry. Therefore, senior managers who want product development teams to strive for innovative outcomes should motivate team members to take the risk of pursuing unique and untried ideas. As such, we expect the following:

H6: Encouragement given to a cross-functional product development team to take risk is positively related to new product innovativeness.

Monitoring of the project by senior management. As noted previously, innovative ideas do not just happen. Rather, they typically emerge from an effort-intensive process that requires perseverance to overcome inevitable conceptual and technical obstacles. Indeed, one of the most significant determinants of the creativity of outcomes is the motivation people have to engage in the task at hand (Amabile 1983; Andrews and Smith 1996).

In the context of cross-functional teams, close monitoring of a project by senior management signals to the team and to others in the firm that a particular project is important. This contributes to creating a sense of pride among team members and builds enthusiasm and excitement toward the project (Kanter 1988; Van de Ven 1986). In essence, close monitoring should elevate the team’s motivation, which in turn leads to the development of innovative products (Amabile 1983).

Close monitoring of a project by senior management can also help a team obtain cooperation for the project from others in the firm. Because a new product development team is dependent on the resources and facilities of various functional areas, such cooperation is critical to implementing a team’s innovative ideas and plans. It is difficult not to cooperate with a project team whose progress is closely monitored by senior management.

Conversely, if monitoring of the project by senior managers becomes excessively close or involved, the team can perceive this as interference in the project. Such a perception can have a negative effect on the team’s motivation and its commitment to developing a truly innovative product (Kanter 1983, 1988). In other words, beyond a point, close monitoring of the project by senior management may have adverse consequences for innovativeness. Therefore,

H7: New product innovativeness will be highest when project monitoring by senior management is moderate.

Customers’ influence on the new product development process. In this study, we focus on customers’ influence during the initial stages of the product development process—where the foundation for product innovativeness is usually laid. It has been argued that input from customers will result in only incremental product improvements that are less novel than what is possible through engineering-driven innovation (Bennett and Cooper 1981). Certainly, such a situation can arise if managers passively accept customer input and do not subject it to further evaluation. However, the bulk of the evidence suggests that customer input will enhance innovativeness. At the outset of a project, directly exposing members of the product development team to customers’ needs/problems and the consumption context can motivate members to strive for more innovative solutions to customers’ problems (Kanter 1988). Likewise, systematic study of lead users has proven to be a source of innovative ideas (von Hippel 1988). As a project goes on, customer research—in particular, extensive concept testing during the early stages of a project—is one of the major processes that distinguish successful new product development projects from failures (Cooper 1993). Indeed, given that one of the most basic issues addressed in concept testing is the extent to which a proposed new product adds value compared with existing alternatives, customer input should result in more innovative products. We therefore predict the following:

H8: Customers’ influence on the new product development process is positively related to new product innovativeness.

Team Characteristics and Contextual Influences on the Team as Moderators of the Superordinate Identity–Innovativeness Relationship

The integration of diverse perspectives and ideas is at the core of the creative process and therefore is a central determinant of the innovativeness of the new product concept. We have also discussed the expectation that a strong psychological bond (i.e., superordinate identity) among members in a cross-functional team will be a primary determinant of the extent to which the integration of diverse ideas and perspectives occurs. As such, it is worthwhile to examine conditions that may elevate or blunt the superordinate identity–innovativeness relationship.

In essence, as superordinate identity increases, the potential for surfacing innovative new product concepts increases. In this study, we examine the role of three factors that are expected to affect the extent to which this potential is realized: (1) encouragement to take risk, (2) social cohesion, and (3) functional diversity. We focus on these variables because they are among the factors most widely considered by managers in forming cross-functional teams (Gupta, Raj, and Wilemon 1986; Katzenbach and Smith 1993; Takeuchi and Nonaka 1986).

Encouragement to take risk. Although an increase in superordinate identity creates the potential for creative breakthroughs, if encouragement to take risk is low, the
motivation to strive for such breakthroughs by thinking outside the box is limited. We return to the Ford minivan example cited previously to examine how this might happen. It is conceivable that this team had a high degree of superordinate identity, but the unwritten rule of sticking to conventional practice would constrain any potential for breakthrough thinking. Conversely, when encouragement to take risk is high, we would expect the effect of superordinate identity in such a team to be elevated. High encouragement to take risk provides the motivation to think outside the box and tap the creative potential that increases as superordinate identity increases. As such, we expect the following:

\( H_7 \): The positive effect of superordinate identity on new product innovativeness will be enhanced as encouragement given to the team to take risk increases.

Social cohesion. As we discussed previously, the discovery of novel linkages among ideas and concepts does not just happen on its own but requires surfacing and challenging assumptions held by various team members (Mason and Mitroff 1981). At a minimum, it requires that team members feel free to express opinions, perspectives, and beliefs that differ from those held by others in the team. However, as social cohesion goes beyond a moderate level, assumption challenging and sharing of divergent/dissenting beliefs may not readily occur and may even be thwarted (Janis 1982; King and Anderson 1990). Thus, when superordinate identity increases, a moderate level of social cohesion enables a team to walk the fine line between integrating diverse views and simultaneously being able to challenge one another’s ideas freely. In comparison, high social cohesion will have an adverse effect when superordinate identity increases. When members in a high superordinate identity team strive to integrate functional information, high social cohesion constrains the expression of dissenting views and the challenging of assumptions underlying existing approaches and thus reduces the likelihood of discovering novel linkages. Therefore,

\( H_8 \): The positive effect of superordinate identity on new product innovativeness will be weakened as social cohesion increases from moderate to high levels.

Functional diversity. Functional diversity can be thought of as providing the basic building blocks for creative thinking—different perspectives and ideas. As such, when functional diversity is low, high superordinate identity teams have minimal raw material to work with; that is, the potential to integrate diverse perspectives is high, but there are few perspectives to integrate. At the other extreme, however, when functional diversity becomes too great, it creates information overload and increases the general complexity of team problem solving. Under such conditions, there is a strong tendency to revert to algorithmic forms of problem solving (Van de Ven 1986), which circumvents the discovery of novel linkages. Thus, although superordinate identity increases the likelihood of integrating diverse perspectives, high functional diversity is expected to blunt this benefit by limiting a team’s ability to discover new connections. As such, we expect the following:

\( H_9 \): The positive effect of superordinate identity on new product innovativeness will be highest at a moderate level of functional diversity.

METHOD

Data Collection

We tested hypotheses using data collected through a mail survey from key informants in cross-functional teams involved in recent major new product initiatives. To identify candidate projects and related key informants, we created a list of consumer product manufacturing firms and their divisions that introduced new products within the two years preceding this survey. Following similar key informant research, our goal was to identify a person who would be highly knowledgeable about team events and practices (Cini, Moreland, and Levine 1993). In the present study, this person was the project manager. Project managers can belong to various functional areas, but we decided to focus only on projects that had project managers from the marketing area, because in consumer product companies (the focus of our study), many new product development projects are coordinated by marketing managers.

We contacted our short-listed firms by telephone to identify managers from the marketing area who recently coordinated new product development projects. Next, we contacted these people and screened them to confirm that they had recently managed new product development initiatives and that such initiatives used a cross-functional team. Project managers who met these criteria were asked to complete questionnaires that were mailed to them after the screening.

In completing the questionnaire, respondents were asked to focus on their most recently completed new product development project that met the previously discussed criteria. Questionnaires were sent to 240 project managers. A reminder with another copy of the questionnaire was sent to managers who had not responded after three weeks. A total of 141 usable responses were received, yielding a 58.8% response rate. The industries in the sample consisted of appliances, lawn care equipment, office supplies, toys, processed food products, health and beauty aids, and household products. There were no significant differences between early and late respondents, which suggests that nonresponse bias was not a serious concern (Armstrong and Overton 1977). The average time taken for the development of the products reported in our study was 16.4 months, indicating that these were indeed major new product initiatives. On average, these projects were completed 7.8 months before data collection.

Measures

Whenever possible, existing measures of the constructs were used. All measures were pretested on 37 project managers. On the basis of the pretest, measures were refined. Detailed interviews were held with seven of these managers to ascertain their interpretation of the items in the measures. On the basis of their feedback, the questionnaire was further revised and administered to the full sample (for sample scale items, see the Appendix). Descriptive statistics and reliability for each measure and correlations among measures are included in Table 2.

New product innovativeness was operationalized as the extent to which a new product is perceived to be novel compared with other competing products and appropriate from the perspective of the marketplace. This measure is a slight modification of the creativity scale used by Andrews and Smith (1996) and Besemer and O’Quin (1986). The innovativeness scale is a ten-item, seven-point semantic differential
Table 2
DESCRIPTIVE STATISTICS, RELIABILITIES, AND INTERCORRELATIONS AMONG Refined MEASURES

<table>
<thead>
<tr>
<th>Measures</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Innovativeness</td>
<td>4.13</td>
<td>59</td>
<td>80</td>
</tr>
<tr>
<td>2. Superordinate identity</td>
<td>4.82</td>
<td>1.32</td>
<td>91</td>
</tr>
<tr>
<td>3. Social cohesion</td>
<td>5.07</td>
<td>1.11</td>
<td>.86</td>
</tr>
<tr>
<td>4. Functional diversity</td>
<td>5.72</td>
<td>1.85</td>
<td></td>
</tr>
<tr>
<td>5. Encouragement to take risk</td>
<td>4.41</td>
<td>1.36</td>
<td>83</td>
</tr>
<tr>
<td>6. Project monitoring</td>
<td>3.75</td>
<td>1.36</td>
<td>68</td>
</tr>
<tr>
<td>7. Customers’ influence</td>
<td>4.85</td>
<td>1.56</td>
<td>91</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Simple Correlations</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1.00</td>
<td>0.64</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.05</td>
<td>0.64</td>
<td>0.61</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>0.08</td>
<td>1.46</td>
<td>0.00</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>0.23</td>
<td>-1.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>0.26</td>
<td>-2.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>0.25</td>
<td>-1.00</td>
<td>1.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

*p < .10
**p < .05
***p < .01.

A principal component factor analysis using varimax rotation suggested that the scale had two dimensions: one representing novelty and the other appropriateness of the new product. Although these two dimensions are conceptually different from each other, as discussed previously, they are an integral part of the overall concept of innovativeness of a new product and thus should be combined to form a single scale (Andrews and Smith 1996). To determine how these two dimensions should be combined, we regressed a global measure of innovativeness on novelty and appropriateness. The global measure was a single-item, seven-point scale that asked the respondents to rate how innovative the product was in satisfying customer needs compared with competing products. We used the standard regression coefficients of novelty and appropriateness as weights for combining these dimensions.

Superordinate identity was operationalized as the extent to which members of a team identify with the team (rather than merely with their functional areas) and perceive a stake in the success of the team. The superordinate identity measure is based on a measure proposed by Hinkle and colleagues (1989). The superordinate scale is a six-item, seven-point Likert-type scale.

Social cohesion was measured as the degree of interpersonal attraction, comfort, and commitment to maintaining close interpersonal relationships with other members of the project team. Our measure was based on a measure used by Zaccaro and McCoy (1988). The social cohesion scale is a four-item, seven-point semantic differential scale. The mean of this scale is 5.1, which suggests that social cohesion in the sample is beyond a moderate level, as was anticipated at the outset of this study.

Functional diversity was operationalized as the number of functional areas represented on the team whose members were fully involved in the project rather than being ad hoc specialists or consultants who were engaged only for a limited time (Brown and Eisenhardt 1995). The average number of functional areas in a team was six.

Encouragement to take risk was measured in terms of the degree to which team members perceived that they were encouraged to be venturesome and to pursue unique and untried ideas. A new four-item, seven-point Likert-type scale was developed to measure encouragement to take risk.

Monitoring by senior management was operationalized as the extent to which senior management showed interest in the project and monitored its progress. A new three-item, seven-point Likert-type scale was developed for this construct.

Customers’ influence was operationalized as the extent to which input from end customers was relied on in the development of the product concept and design. Customer influence is a new three-item, seven-point Likert-type scale.

Covariates The first covariate, ease of communication among departments, was measured on a two-item, seven-point Likert-type scale that was based on the items in the interdepartmental connectedness measure used by Jaworski and Kohli (1993). The second covariate, extent of competition among new products, was operationalized as the average number of new products that are launched in the target market every year. The project manager’s style was measured on a new three-item, seven-point scale that captures the extent to which the manager encouraged members to participate actively in the discussions/decisions related to the project. Reward structure was measured as the extent to which rewards for members involved in projects are linked to the performance of the overall project rather than to the performance on their respective functional tasks. Resource availability was measured by a single item. Finally, team size referred to the number of full-time members.

RESULTS

Hypothesis Testing

We tested hypotheses using the moderated regression analysis suggested by Aiken and West (1991) and Jaccard, Wan, and Turrisi (1990). To minimize multicollinearity among interaction terms and their constituent terms in the regression model, we mean-centered all independent vari-
ables (Aiken and West 1991; Jaccard, Wan, and Turrisi 1990). We also calculated variance inflation factors for
independent variables in the model and found that all were well below ten, the value above which there should be con-
cern about multicollinearity (Myers 1986). As can be seen in
Table 3, the terms in the model account for 32% of the var-
ance in new product innovativeness, and the F statistic was 4.64 (p < .001).

Effects of Team Characteristics and Contextual Influences on New Product Innovativeness

It is important to note that because we have mean-
centered the variables in the model, the interpretation of
main effects changes slightly. In a main effects-only model,
the main effects are interpreted as constant effects. For
example, in a main effects model (y = a_0 + a_1X_1 + a_2X_2),
the coefficient of X_1 represents the effect of the variable X_1
holding all other variables in the model constant. In a
mean-centered interaction effects model, the coefficient of
X_1 is instead interpreted as the regression of Y on X_1 when
the variable X_2 is at its mean value (Aiken and West 1991;
Jaccard, Wan, and Turrisi 1990). Indeed, main effects in
the latter model can be considered the weighted average effect
across all observed values of the other predictors (Aiken and
West 1991). In view of this interpretation, we refer to
the main effects as centered main effects.

We found that superordinate identity is positively related
to new product innovativeness (b = .28, t = 3.26, p < .01). H_1
is supported. Also, as predicted in H_2, social cohesion is
negatively related to innovativeness, though marginally (b =
-.16, t = -1.41, p < .10). Functional diversity was predicted
to have an inverted-U relationship with innovativeness.
However, we found no relationship between functional
diversity and innovativeness: The coefficients of the linear
term (b = -.22, t = -.67, p < .30) and the squared term (b =
.07, t = .68, p < .30) are not significant. H_3 is not supported.

Consistent with our expectation, encouragement to take
risk is positively related to new product innovativeness (b =
.18, t = 1.97, p < .05). Thus, H_4 is supported. It was hypoth-
thesized that monitoring by senior management would have a
nonlinear (inverted-U) relationship with new product innova-
tiveness (H_5). This prediction is not supported because the
coefficient of the squared term for monitoring is not signifi-
cant (b = .01, t = .68, p < .30). However, the linear term for
monitoring is significant and positive, suggesting that there
exists a positive, centered main effect of monitoring by sen-
ior management on new product innovativeness (b = .44, t =
4.09, p < .01). Also, as expected, customers' influence is
positively related to new product innovativeness (b = .17, t =
1.72, p < .05). H_6 is supported.

Table 3

<table>
<thead>
<tr>
<th>Unstandardized Regression Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coefficient (b)</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>H_1 Superordinate identity</td>
</tr>
<tr>
<td>H_2 Social cohesion</td>
</tr>
<tr>
<td>H_3 Functional diversity</td>
</tr>
<tr>
<td>Diversity (squared term)</td>
</tr>
<tr>
<td>H_4 Encouragement to take risk</td>
</tr>
<tr>
<td>H_5 Monitoring by senior management</td>
</tr>
<tr>
<td>Monitoring (squared term)</td>
</tr>
<tr>
<td>H_6 Customers' influence</td>
</tr>
</tbody>
</table>

Interaction Effects

Moderating Effects of Characteristics of the Team and Contextual Influences on the Effect of Superordinate Identity

<table>
<thead>
<tr>
<th>Interaction</th>
<th>Coefficient (b)</th>
<th>Standard Error (SE)</th>
<th>t</th>
</tr>
</thead>
<tbody>
<tr>
<td>H_1 Superordinate identity \times encouragement to take risk</td>
<td>02</td>
<td>(01)</td>
<td>1.67**</td>
</tr>
<tr>
<td>H_2 Superordinate identity \times social cohesion</td>
<td>-04</td>
<td>(01)</td>
<td>-3.01***</td>
</tr>
<tr>
<td>H_3 Superordinate identity \times functional diversity</td>
<td>-04</td>
<td>(03)</td>
<td>-1.28*</td>
</tr>
<tr>
<td>Superordinate identity \times diversity (squared term)</td>
<td>-00</td>
<td>(01)</td>
<td>-2</td>
</tr>
</tbody>
</table>

Covariates

<table>
<thead>
<tr>
<th>Covariate</th>
<th>Coefficient (b)</th>
<th>Standard Error (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ease of interfunctional communication</td>
<td>40</td>
<td>(19)</td>
</tr>
<tr>
<td>Resource availability</td>
<td>12</td>
<td>(27)</td>
</tr>
<tr>
<td>Competition among new products</td>
<td>-07</td>
<td>(05)</td>
</tr>
<tr>
<td>Firm's reward structure for projects</td>
<td>-12</td>
<td>(28)</td>
</tr>
<tr>
<td>Project manager's operating style</td>
<td>15</td>
<td>(16)</td>
</tr>
<tr>
<td>Team size</td>
<td>22</td>
<td>(26)</td>
</tr>
</tbody>
</table>

R-square = .41
Adjusted R-square = .32
F = 4.64***

*p < .10
**p < .05
***p < .01

There was some concern that variables such as social cohesion, func-
tional diversity, and encouragement to take risk can also act as antecedents
of superordinate identity and thus may influence innovativeness through
superordinate identity. We therefore conducted a test of mediation (Baron
and Kenny 1986), which suggests that these variables are not antecedents
of superordinate identity.
Team Characteristics and Team–Senior Management Interface as Moderators of the Superordinate Identity–Innovativeness Relationship

Consistent with $H_7$, the relationship between superordinate identity and new product innovativeness is strengthened by encouragement to take risk. The interaction between encouragement to take risk and superordinate identity is significant in the expected direction ($b = .02, t = 1.67, p < .05$). Likewise, beyond a moderate level, social cohesion weakens the relationship between superordinate identity and new product innovativeness ($b = -.04, t = -3.01, p < .01$). $H_8$ is supported.

Finally, $H_9$ predicts that the positive effect of superordinate identity on new product innovativeness will be highest at a moderate level of functional diversity. This hypothesis is not supported, as the coefficients of both the linear term ($b = -.04, t = -1.28, p < .1$) and the squared term ($b = -.01, t = -3.83, p < .25$) of the interaction between functional diversity and superordinate identity are not significant.

Covariates

As expected, the covariate ease of communication among functional areas at the firm level has a positive effect on new product innovativeness ($b = .40, t = 2.14, p < .05$). Resource availability does not have any effect on innovativeness ($b = .12, t = .44, p < .35$). The extent of competition among new products has a weak, negative relationship with innovativeness ($b = -.07, t = -1.31, p < .10$). One possible explanation for this negative effect could be that in markets characterized by a high velocity of innovation, managers often find themselves in catch-up positions, which is likely to constrain the time made available to the team for product development. High time pressure adversely affects creativity (Amabile 1983; Andrews and Smith 1996) and thus constrains the innovativeness of the new product. Reward structure does not influence innovativeness ($b = -.12, t = -1.43, p < .35$). There is no effect of the project manager’s operating style on innovativeness ($b = .15, t = .92, p < .20$). Finally, team size is not related to innovativeness ($b = .22, t = .84, p < .25$).

CONCLUSIONS AND DISCUSSION

In this research, we examined how the characteristics of cross-functional teams and contextual influences on teams affect new product innovativeness. Our results indicate that innovativeness is positively related to the level of superordinate identity in the team, encouragement to take risk, customers’ influence, and monitoring of the project by senior management. Social cohesion has a negative effect on new product innovativeness. Finally, the relationship between superordinate identity and new product innovativeness is strengthened as encouragement to take risk increases, but it is weakened as social cohesion moves beyond a moderate level.

Functional diversity had no effect on new product innovativeness. With an average of six functional areas in the team, the teams in our sample might have been beyond a threshold at which functional diversity matters. Likewise, this level of diversity might not have reached a threshold of being dysfunctional. Further research may be able to identify teams with a wider range of functional diversity to understand how this variable affects innovativeness.

Also, contrary to our expectations, we did not find an inverted-U relationship between monitoring of the project by senior management and innovativeness. Instead, our results suggest only a positive effect of monitoring on innovativeness. It is possible that the effects of close project monitoring need to be studied jointly with the effects of the type of monitoring or control (behavioral versus outcome) exercised by senior management (Hendersen and Lee 1992; Olson, Walker, and Ruekert 1995). We speculate that though behavioral control may restrict decision-making freedom and therefore creativity, outcome control would place no direct bounds on decision making per se. Perhaps many teams in our study were not under behavioral control, and as a result, close monitoring might not have had a negative effect on innovativeness. The potential for such an interaction suggests that type of control would be an interesting variable to include in future studies on cross-functional teams and product innovativeness.

Limitations

This study deals with relatively stable and mature consumer products for which the product development process consists of well-understood steps. Such products require a deliberate development process that emphasizes extensive planning. In contrast, for products in an uncertain industry, such as high technology, experiential tactics involving frequent iterations of design are more appropriate (Brown and Eisenhardt 1997; Eisenhardt and Tabrizi 1995). As such, the findings of our research may not generalize to firms that operate in uncertain or rapidly changing environments.

Also, our study is focused primarily on internal dynamics in the team. As such, we have considered variables related to the characteristics of the team and contextual influences on the team that are expected to play an important role in affecting internal team dynamics and thereby influencing new product innovativeness. However, factors related to organization structure and culture are also expected to affect new product outcomes (Brown and Eisenhardt 1997; Eisenhardt and Tabrizi 1995). Although we have accounted for several organizational factors either as contextual influences or as covariates, there are several others that our team-level study has not considered. Inclusion of organizational factors in future studies on teams can help draw implications for the design and development of organization structure and culture that help promote innovativeness in new product development teams.

Research and Managerial Implications

The findings of this study have several implications for researchers and managers. Regarding the former, recent work in the area of organizational innovation notes that the different “thought worlds” of functional areas can hinder new product development (Dougherty 1992). In the present study, we augment this research by showing that creating a strong superordinate identity within a cross-functional team can reduce the adverse effects of functional identities or thought worlds.

More generally, the superordinate identity construct introduced in this study can serve as a foundation for further research on cross-functional teams in new product development and brand management. In particular, three research areas are in need of special attention. First, the development...
of many complex products involves the use of multiple teams that handle different parts of the product or focus on different technologies involved in the product. The problems of such multiple-team projects can be different from those of the single-team projects that we have focused on in this study. For example, in multiple-team projects, managing interteam relations can turn out to be as complicated as managing intrateam relations. Researchers may want to examine whether superordinate identity is an equally important factor in multiple-team projects in terms of creating harmonious and productive relationships among various teams.

Second, a psychological bond such as superordinate identity is expected to play a particularly crucial role in settings in which team members are located far from one another and rarely meet (as is increasingly happening in computer-mediated communication). In such teams, spatial proximity, which is considered important for integration among team members, is generally absent. The extent to which a strong sense of superordinate identity may be able to compensate for the absence of spatial proximity in such teams needs to be examined.

Third, although we have focused on the effect of superordinate identity, creating a strong sense of organizational identity can be another way to overcome the adverse effect of functional identities (Fisher, Maltz, and Jaworski 1997). However, it might be speculated that because superordinate identity is based on an immediate and well-defined project team with which a member can identify easily, it is expected to be more salient and perhaps more effective than organizational identity, which is based on a diffused entity such as a large organization. In further research, it would be useful to compare the effects of these two factors on new product outcomes.

Furthermore, regarding research implications, our study has empirically shown for the first time that, beyond a moderate level, social cohesion has a negative effect on new product innovativeness. Further research can explore this relationship in teams with a wide range of social cohesion (or by manipulating this variable in an experimental setting) to understand if the relationship is nonlinear in nature; that is, as social cohesion increases from a low to a moderate level, innovativeness improves, but beyond the moderate level, innovativeness is hindered. Relatedly, from a practical perspective, senior managers should manage social cohesion carefully because of its negative effect on innovativeness and its ability to weaken the positive effect of superordinate identity on innovativeness.

Our study also informs senior managers that certain popular notions about what is good for teams may not be correct. For example, it is generally believed that high diversity helps teams become more creative. However, our results suggest that functional diversity (within the range covered in this study) does not affect new product innovativeness. Considering that the formation of highly diverse product development teams has its own costs (e.g., many employees may be diverted from their current positions to work on the project, team members can face adjustment problems when they rejoin their functional areas after project completion; Ford and Randolph 1992), senior managers may want to include in teams only functional areas that are essential to the project. Representatives from areas that have been skipped can be appointed as part-time consultants to the team so that their input and feedback are still available to the project.

Finally, this research reinforces the importance of a culture that encourages risk taking among teams during the new product development process. If firms indeed want unique products, they need to be careful that any other steps they take do not subtly discourage such risk taking. For example, in their search for improved product quality, firms are increasingly subscribing to the notion of continuous improvement of existing products and processes. Such improvements have at their foundation the removal of variation in and high standardization of these processes (Clark and Fujimoto 1991). However, innovativeness requires a climate in which variation is accepted.

---

**Appendix**

**SAMPLE SCALE ITEMS**

<table>
<thead>
<tr>
<th>A Innovativeness</th>
<th>Novel</th>
<th>Original</th>
</tr>
</thead>
<tbody>
<tr>
<td>Novelty</td>
<td>1 2 3 4 5 6 7</td>
<td>Novel</td>
</tr>
<tr>
<td>Commonplace</td>
<td>1 2 3 4 5 6 7</td>
<td>Novel</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Appropriateness</th>
<th>Useful*</th>
<th>Inappropriate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appropriate*</td>
<td>1 2 3 4 5 6 7</td>
<td>Useless</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>B Superordinate Identity*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C Social Cohesion</th>
<th>Members were not very friendly with each other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Members were very friendly with each other *</td>
</tr>
<tr>
<td>2</td>
<td>Members were committed to maintaining close interpersonal relationships *</td>
</tr>
<tr>
<td>1</td>
<td>Members were not very friendly with each other</td>
</tr>
<tr>
<td>2</td>
<td>There was no such commitment to maintaining close interpersonal relationships</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>D Encouragement to Take Risk*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
</tbody>
</table>

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Appendix CONTINUED

E. Monitoring of the Project by Senior Management

- Senior management was very actively involved in the project
- Senior management very closely monitored the progress of the project

F. Customers' Influence

- Extent to which input and feedback from end users was relied on during the development: product idea/concept
- Extent to which input and feedback from end users was relied on during the development: design

G. General Ease of Communication Among Departments

- In this organization, employees from different departments feel comfortable contacting each other when the need arises

H. Project Manager's Operating Style

- Encouraged team members to actively participate in project planning

*Reverse coded
*i = strongly disagree, 7 = strongly agree
*1 = a great extent, 7 = not at all

REFERENCES


