

THE INTERPLAY BETWEEN BOUNDARY SPANNING ACTIVITIES AND SOCIAL COHESION IN NEW PRODUCT DEVELOPMENT TEAMS

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ABSTRACT

Team boundary spanning represents a team's actions to establish links and manage interactions with individuals and groups external to the team with the purpose of coordinating activities and accessing information, resources and political support. Research in NPD has shown that team boundary spanning activity positively influences new product performance. Thus, reaching outside the team and interacting with others can provide teams with valuable resources for NPD projects. However, access to external resources cannot guarantee new product performance if these resources are not considered by the NPD team. In this respect, recent work suggests that team-level psychological characteristics such as social cohesion could undermine team members' motivation to use resources obtained via boundary spanning efforts. In light of the previous discussion, two important research questions arise: 1) Does social cohesion hinder the impact of team boundary spanning on new product performance? Is the relationship between team boundary spanning and social cohesion contingent on the type of task given to the team? The current study examines these two research questions using data from 140 NPD teams.

Keywords:

Team boundary spanning, social cohesion, external task interdependence, project newness, new product competitive advantage.

RESUMEN

Consideramos como actividades de expansión de fronteras de un equipo las acciones encaminadas a establecer vínculos y dirigir las interacciones con individuos y grupos externos al mismo realizadas con el propósito de coordinar tareas y acceder a información, recursos y apoyo político. La literatura sobre desarrollo de nuevos productos ha mostrado que ir más allá de los límites del propio equipo e interactuar con otros puede proveer al equipo con recursos valiosos para sus proyectos de innovación. Sin embargo, el mero acceso a recursos externos no garantiza el éxito del nuevo producto; los recursos han de ser utilizados. A este respecto, trabajos recientes sugieren que las características psicológicas a nivel equipo, por ejemplo, la cohesión social, pueden minar la motivación de los miembros del equipo para usar los recursos obtenidos a través de la realización de esfuerzos de expansión de fronteras. A la luz de esta consideración, en esta investigación nos planteamos dos cuestiones: ¿puede la cohesión social ocultar el impacto positivo de las actividades de expansión de fronteras en el resultado del nuevo producto? ¿Es la relación entre las actividades de expansión de fronteras y la cohesión social contingente con el tipo de tarea que realiza el equipo? El presente trabajo en curso examina estas dos cuestiones utilizando datos de 140 proyectos de desarrollo de nuevos productos.

Palabras clave:

Expansión de fronteras del equipo, cohesión social, interdependencia externa, novedad del proyecto, ventaja competitiva del nuevo producto.

1. Introduction

In today's rapidly changing and increasingly complex environment, new product development (NPD) performance depends, more than ever, on a team's ability to span boundaries and forge relationships with parties external to the team itself. Team boundary spanning represents a team's actions to establish links and manage interactions with individual and groups inside and outside the organization with the purpose of coordinating activities and accessing information, resources and political support (Ancona et al., 2009; Joshi et al., 2009). Research in NPD has shown that team boundary spanning activity positively influences a number of performance outcomes (Ancona and Caldwell, 1992; Howell and Shea, 2006). In this study, we expect team boundary spanning to have a positive effect on new product competitive advantage. The arguments for the positive effect of team boundary spanning on new product competitive advantage are in line with research in NPD and organizational learning that asserts that product advantage depends, in part, on a firm's ability to access external knowledge and resources (Li and Calantone, 1998; Kim and Atuahene-Gima, 2010).

While team boundary spanning gives a NPD team access to external information and resources through relationships with external partners, for it to facilitate new product competitive advantage, the resources received need to be integrated into a new product design (Maurer et al., 2011). Access to external resources may be a precondition to new product competitive advantage however, it does not guarantee it. External resources cannot guarantee new product competitive advantage if these resources are not considered by the NPD team (Maurer et al., 2011). In this respect, recent work on boundary spanning suggests that team members can be differentially receptive to information and resources generated from boundary spanning efforts depending on their psychological characteristics (Dokko et al., 2014; Oh et al., 2004; 2006). One of such team-level psychological characteristics likely to influence team members' motivation to use external resources is team social cohesion. In light of the previous discussion, two important research questions arise: 1) Does social cohesion assist or hinder the impact of team boundary spanning on new product competitive advantage?, and 2) Is the moderating effect of social cohesion contingent on the type of task given to the NPD team? In order to shed some light into these questions, the current study investigates a negative moderating effect of social cohesion on the relationship between team boundary spanning and new product competitive advantage. Furthermore, we explore the role that project newness and external task interdependence play in enhancing or reducing the negative moderating effect of social cohesion on the relationship between team boundary spanning and new product competitive advantage. To our knowledge, no study has ever examined these relationships.

2. Theoretical framework and hypothesis development

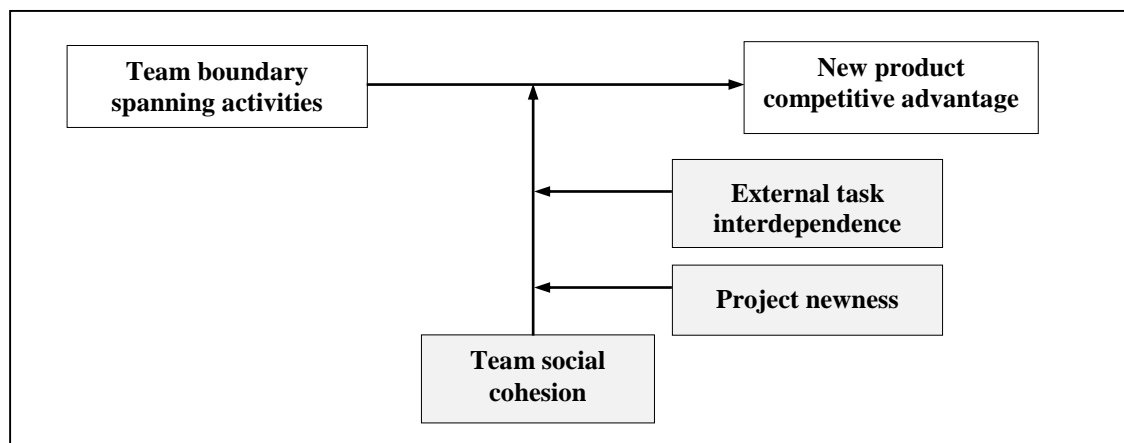
Figure 1 illustrates our theoretical model which explores the relationships between team boundary spanning, social cohesion, external task interdependence, project newness and new product competitive advantage. Team boundary spanning activity encompasses the various activities through which team members seek connections with important external actors, inside and outside the organization, in an effort to facilitate team goals and objectives. Team boundary spanning includes an array of different activities, mainly ambassador, task coordination and scouting activities (Ancona and Caldwell, 1992; Marrone, 2010). Ambassador activities pertain to talking the NPD project up, building relationships and reporting on the team progress to upper management and external clients. Task coordination activities involve negotiating ad-hoc resources, co-solving problems, and coordinating specific NPD activities with groups inside and outside the organization. Scouting activities are directed at gaining problem- or project-specific information as well as at understanding the general environment including trends, opportunities and threats (Ancona et al., 2009; Marrone, 2010). Team boundary spanning is expected to have a positive effect on new product competitive advantage.

Our theoretical framework posits a negative moderating effect of social cohesion on the relationship between team boundary spanning and new product competitive advantage. The theoretical arguments for the proposed moderating effect lie within the social identity theory. Social identity theory (Hogg and Abrams, 1988; Tajfel, 1982; Tajfel and Turner, 1986) has been used to explain the effects of intragroup processes such as team identity and social cohesion on intergroup relationships (Dokko et

al., 2014; Rosenberg and Treviño, 2003). A basic premise of social identity theory is that individuals derive self-worth from their group membership. Because social identities have important consequences for individuals, group members will actively attempt to maintain and even enhance a positive group identity (Turner and Pratkanis, 1998). Such need for maintaining a shared positive view of the functioning of the group engenders intergroup bias (Hewstone et al., 2002; Rosenberg and Treviño, 2003). Intergroup bias refers to the systematic tendency to evaluate one's own membership group (the in-group) or its members more favorably than a non-membership group (the out-group) or its members (Hewstone et al., 2002).

In our study, social cohesion is seen as a catalyst for strong team identity. Members of socially cohesive teams have been described as displaying greater commitment to their group and adherence to group norms than members of less socially cohesive teams. In addition, members of groups with high social cohesion, pay more attention to one another, show signs of greater mutual affection and demonstrate more coordinated behavior and self-disclosure than individual working in less cohesive groups (Levine and Moreland, 1998; Wong, 2004). It is because of these positive intragroup dynamics that members of highly cohesive teams display strong group identities. The greater adherence to norms, increased attention and interaction and coordinated behavior stemming from high social cohesion makes it more likely that team members see each other as prototypical and/or representative group members, and thus that exhibit a strong team's identity (Rosenberg and Treviño, 2003). In keeping with social identity research that has shown that when groups display a salient social identity, they are more prone to exhibit negative outgroup bias (Turner and Pratkanis, 1998; Hogg and Terry, 2000), groups with high social cohesion are expected to access and absorb less information and resources generated via team boundary spanning than groups with low social cohesion, limiting the effectiveness of team boundary spanning in generating new product competitive advantage. Therefore, we propose a negative moderating effect of social cohesion on the relationship between team boundary spanning and new product competitive advantage.

FIGURE 1
Conceptual Framework



Furthermore, prior work on social identity theory suggests that social cohesion's negative moderating effect on team boundary spanning could be exacerbated by situations or factors that present a threat to the group's image (Turner and Pratkanis, 1998). Because cohesive groups are highly motivated to protect the group identity, in instances where such identity is threatened, such groups will be predisposed to maintain or even enhance the shared positive image of the group by making use of strategies that favor among other things, uniformity, self-censorship and outgroup discrimination (Turner and Pratkanis, 1998). For instance, Riccobono et al. (2016) noted that a lack of internal control over project decisions in highly cohesive teams can accentuate a group's motivation to disregard any involvement or suggestions coming from the outside. In keeping with the previous discussion, we expect external task independence and project newness to strengthen the negative moderating effect of social cohesion on the relationship between team boundary spanning and new

product competitive advantage. External task interdependence refers to the extent to which a team believes it is dependent on individuals and groups external to the team to carry out its tasks and perform effectively (Drach-Zahavy and Somech, 2010). Project newness refers to the extent to which the new product is new to the firm and to the market; it reflects the degree of experience that the firm has with the NPD project (Atuahene-Gima and Evangelista, 2000). Both external task interdependence and project newness are acknowledged to represent significant threats to a team's collective identity (Akgun et al., 2007; Glynn et al., 2010).

3. Methodology, analysis and results

Data for this study were collected from Spanish manufacturing firms classified as high-technology and medium-high technology by EUROSTAT. The sampling frame was the Amadeus directory of Spanish firms, which provided a list of 3,786 manufacturing companies across different industrial sectors. We randomly selected 25 percent of the firms in each of the industry groups, which resulted in 946 manufacturing firms.

In order to reduce the presence of common method bias (Podsakoff et al., 2012), a decision was made to collect the data in two stages. First, for each company in our sample, a questionnaire focused on boundary spanning activities of NPD teams was mailed to the person responsible for NPD activities at each company. To answer the questionnaire, respondents were asked to select a new product launched during the last three years, whose development and launch they had led. For this first round, we obtained a total of 146 completed surveys. Data on the outcomes and moderator variables of team boundary spanning were collected using a second survey. 140 of the 146 firms that responded to the first survey, completed the second questionnaire. The time lag between the first and second surveys ranged between one to four months.

In this study, boundary spanning was conceptualized as reflective-formative second-order construct. We argue that boundary spanning is formed by three activities, i.e., ambassador, scouting and task coordination, each of them realized in connection with individuals and groups inside the organization –intrafirm boundary spanning– as well as with individuals and groups outside the organization –extrafirm boundary spanning– (Ancona et al., 2009; Marrone, 2010; Sleep et al., 2015; Carbonell and Rodríguez-Escudero, 2017). Team social cohesion was operationalized with a 4-item scale taken from Sethi et al., (2001), external task interdependence using a 3-item scale from Sethi (2000) and project newness and new product competitive advantage with 3-item scale each from McNally et al. (2010). Firm size and importance of innovation were included as control variables. Reliability, convergent and discriminant validity for the scales were all confirmed.

The proposed model was tested using Partial Least Squares Structural Equation Modeling (PLS-SEM) algorithm (Smart PLS 3.1.5). The study's results seem to confirm our hypotheses. Team boundary spanning has a positive effect on new product competitive advantage. Social cohesion negatively moderates the relationship between team boundary spanning and new product competitive advantage. The results show negative triple interaction effects between external task interdependence, social cohesion and team boundary spanning and between project newness, social cohesion and team boundary spanning, suggesting that both external task interdependence and project newness accentuate the negative moderating effect of social cohesion on the relationship between team boundary spanning and new product competitive advantage.

Our findings have several implications for managers. First, findings suggest that firms should encourage NPD teams to engage in team boundary spanning efforts. As shown, team boundary spanning can enhance new product competitive advantage. Reaching outside the team for the purposes of coordinating activities and obtaining information, knowledge and support can help increase the competitive advantage of new products. Secondly, social cohesion is shown to diminish the performance effects of team boundary spanning in cases where project newness is high and external task interdependence is high. Both project newness and external task interdependence pose a threat to the team identity. Project newness increases the level of uncertainty around the project and thus the risk of project failure, which can be seen as a threat to a group's identity. External interdependence can also pose a threat to the identity of one's team as the team is no longer solely in

control of the development process but it depends on external parties for information, resources and input needed for decision-making and execution of the development project. Under both of these scenarios, highly cohesive teams tend to disregard information and resources stemming from team boundary spanning to the detriment of the boundary spanning efforts. Interestingly, our results suggest that social cohesion does not have a significant moderating effect on team boundary spanning when project newness and external task interdependence are low, which suggests that it is the perception of a threat what activates the negative moderating effect of social cohesion. From this perspective, it is recommended that managers carefully attend to team members' perceptions of external interdependence and project newness as these two factors can be disablers of team boundary spanning's effectiveness through their interactions with social cohesion. For example, with regard to NPD projects with a high degree of newness, it would be highly recommended that managers frame NPD as learning so that members of the NPD team understand that this endeavor is meant to be challenging and full of unknowns and the possibility of failure. Without these efforts, team members are unlikely to take risks and fully utilize the resources gathered via boundary spanning efforts to the detriment of project effectiveness. Regarding external interdependence, managers might attempt to reframe perceived interdependence not as a constraint but as a challenge. For example, managers might emphasize the benefits that can come from cooperating with external parties to increase knowledge flows and creative ideas thus encouraging team members to open up. Taken together, these actions can help deflect the negative impact that project newness and external task interdependence have for highly cohesive teams engaged in team boundary spanning activities.

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