

RESEARCH NOTES AND COMMENTARIES

EFFECTS OF TEAM INPUTS AND INTRATEAM PROCESSES ON PERCEPTIONS OF TEAM VIABILITY AND MEMBER SATISFACTION IN NASCENT VENTURES

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A new venture team is a particular type of top management team neglected by the literature. This study investigated the effects of team inputs and processes on team members' perceptions of team viability and satisfaction in nascent ventures. These outcomes are important as they may be antecedents of team perseverance. The study of 51 new venture teams showed that the presence of a distinct leader was positively related to team satisfaction, while member diversity in educational backgrounds was positively related to perceived team viability. Intrateam processes of social integration and open communication were positively related to both perceived team viability and member satisfaction. Copyright © 2006 John Wiley & Sons, Ltd.

Research in top management teams, or upper echelons, has surged since Hambrick and Mason's (1984) article showing that organizational effectiveness is influenced by top team characteristics. Despite the large number of studies, the effect of diversity on effectiveness is mixed at best with some finding positive effects (e.g., Bantel and Jackson, 1989) and others finding negative effects (e.g., Ancona and Caldwell, 1992). Researchers have speculated that the effect of diversity depends on more complicated relationships among team structure and processes. For instance diversity benefits the team when members

engage in debate (e.g., Simons, Pelled, and Smith, 1999), while the lack of cooperative norms in the team hurts team effectiveness (e.g., Chatman and Flynn, 2001). We examine these relationships by studying top teams at the early stages of venture development.

Understanding teams at the early stages of venture development is important because high-growth and successful ventures are usually team-based and professional investors prefer to invest in teams (Kamm *et al.*, 1990). New ventures are also important because economic growth depends on new ventures replacing failed firms (Reynolds *et al.*, 2000). Within new ventures teams, we focus on nascent ventures where members are taking tentative steps toward firm formation (Carter, Gartner, and Reynolds, 1996). The nascent stage of firm formation is crucial since the team is still fragile

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and will not survive unless it can establish membership, identity, process, and commitment.

For a nascent venture, measures of performance such as sales, profits, and positive cash flows may not yet be relevant as the team is unlikely to have any substantial sales figures when the primary focus is to establish the venture (Carter *et al.*, 1996). Thus, what is important for a nascent venture is that the members stay together and remain excited about the team's ideas. These outcomes could be antecedents of venture perseverance. Goals can be adapted in the face of contradicting evidence, poor decisions can be changed, actions can be remedied, and hostile environments can be abandoned for more supportive ones as long as the team is willing to persevere in the pursuit of its goals. In view of these, the two measures of effectiveness that we focus on are member perceptions of team viability and member satisfaction with the venture. At the nascent stage of venture formation, these perceptions, even when they are caused by distorted thinking, can help new ventures to persevere when the odds of success are against them (Shane and Foo, 1999).

With the scarcity of resources such as time, money, and human resources (Reynolds *et al.*, 2000), a nascent venture has to quickly develop its vision, integrate members, and move the venture forward. Extending existing research on team inputs and processes, this study examines how nascent venture teams might benefit from having a clear leader instead of having multiple leaders. While some studies looked at communication frequency (e.g., Ancona and Caldwell, 1992; Smith *et al.*, 1994), this study focuses on how open communication relates to team outcomes. Members of nascent ventures need to be resourceful and innovative and in such a situation we argue that diversity is positively related to team outcomes (Farr, Sin, and Tesluk, 2003). Finally, this study examined how social integration moderated the effects of diversity on team outcomes. In sum, the study adds to our understanding of how team inputs and processes shape nascent venture outcomes.

HYPOTHESIS DEVELOPMENT

The upper echelons theory argues that team composition influences organizational effectiveness (Hambrick and Mason, 1984). An assumption is that members can communicate their multiple

perspectives with one another and work toward common team goals. This means that both team inputs and team processes influence effectiveness (Knight *et al.*, 1999).

Inputs and perceptions of team viability and member satisfaction

Leaders play an important role in defining member expectations and getting members to agree on team goals. By rewarding members in achieving these goals, leaders promote member satisfaction and perceptions of team viability. Keller (1992) showed that the presence of leaders in R&D teams could inspire team members to expend greater efforts, and to achieve exemplary performance levels. In a meta-analysis, Lowe, Kroeck, and Sivabramaniam (1996) also found that the transformational leadership style is positively related to performance in terms of number of units produced and performance appraisals.

However, having a leader cannot be assumed in a nascent venture. Some teams may operate with no leader while other teams may disagree about who the team leader is. Some teams may even have multiple leaders, perhaps with one focusing on task issues and the other on team maintenance. While having multiple leaders may appear to be beneficial on the surface, there is a limit to which having a voice promotes member buy-in. For example, Peterson (1999) found that having excessive voice leads to lower member satisfaction. Peterson *et al.* (1998) found that successful teams showed greater leader strength, more centralization, and greater rigidity than Janis's (1982) advocated ideal, in which leaders are advised to avoid being dominant in the decision-making process. There is some evidence that at least in some situations having a single leader can be advantageous. A study of student teams by Henry and Stevens (1999) found that teams with a single leader were more productive than those with no leader or teams that had multiple leaders. They argued that single-leader teams made decisions faster and more efficiently. In another setting, that of string quartets, the second violinist has to play second fiddle as the first violinist is expected to play the lead role (Murnighan and Conlon, 1991).

In a nascent venture context, voice often leads to confusion of the overall team goals. In an uncertain context, such as one that nascent ventures face,

some issues cannot be integrated and the need to expend a lot of effort to debate these issues is counterproductive. Hence, a nascent venture needs a clear leader to moderate team discussions, decide on collective goals, and to move the venture forward. For nascent ventures, we contend that teams with a distinct leader are better at focusing their actions in a unified direction. Teams without a clear leader run the risk of straying from their entrepreneurial intents, while those with multiple leaders can be torn between the leaders who can lead the teams in different directions. We therefore hypothesize that:

Hypothesis 1: Presence of a distinct leader is positively related to (i) perceptions of team viability and (ii) member satisfaction in nascent ventures.

Team composition, defined in attributes such as age, sex, and educational level is related to outcomes (e.g., Bantel and Jackson, 1989; Hambrick, Cho, and Chen, 1996). It is important to study the diversity of characteristics in addition to the average level because diversity affects how members interact with one another. Bantel and Jackson (1989) found that diverse teams were more innovative than less diverse teams since diversity increases the team's cognitive resources. Despite the presumption of positive effects, numerous studies showed that diversity can lead to less effective teams (e.g., Ancona and Caldwell, 1992; Foo, Wong, and Ong, 2005). Ancona and Caldwell (1992) found that diversity negatively predicted team-rated performance and manager rated team innovativeness. Diversity also leads to higher turnover (O'Reilly, Caldwell, and Barnett, 1989) and less adaptability to change (O'Reilly, Snyder, and Boothe, 1993). Ancona and Caldwell (1992) speculated that diversity leads to conflict that hinders a team's ability to implement its plans, while Finkelstein and Hambrick (1996) argued that a homogeneous team is able to rally around a shared understanding of what the team needs to accomplish.

A reason for the equivocal findings is that diversity effects depend on the team's context (Stewart and Barrick, 2000). Diversity is less important in established top management teams since members are often experienced and have overlapping expertise. Nascent ventures, however, lack

resources and cognitive benefits outweigh potential costs of diversity. Moreover, in an uncertain environment diversity benefits the team through improved problem-solving capabilities. For example, educational diversity leads to different cognitive styles and perspectives in the team (Wiersema and Bantel, 1992). Having different views is beneficial as members analyze problems from multiple approaches, consider the pros and cons, and use different criteria to choose a course of action (Simons *et al.*, 1999). Nascent ventures face problems including ways to gain market acceptance, to secure finance, and to develop and refine their products or services (Churchill and Lewis, 1983). Diversity is especially important in such an entrepreneurial context, where the need to be innovative requires access to various types of resources and ideas (Farr *et al.*, 2003; Mahmood and Mitchell, 2004). The need for diversity is also exacerbated by the small size of nascent ventures (Roberts, 1991) as each member has a greater and more direct impact on team effectiveness (Welbourne and Cyr, 1999). We therefore hypothesize that:

Hypothesis 2: Diversity is positively related to (i) perceptions of team viability and (ii) member satisfaction in nascent ventures.

Intrateam processes and team performance

Intrateam processes are interactions among team members. Tasks in nascent ventures are often ill defined, which heightens the effect of intrateam processes because these interactions will shape and determine what the team does (Stewart and Barrick, 2000). Several researchers (e.g., Ancona and Caldwell, 1992; Smith *et al.*, 1994) have found significant effects of communication on effectiveness. Communication facilitates problem solving by improving information flow. Despite the apparent benefits of information exchange, the effects of communication on team effectiveness are equivocal. Ancona and Caldwell (1992) found that communication frequency was marginally related to positive manager ratings but hurt member ratings of performance. Smith *et al.* (1994) found that the frequency of communication among top management team members was negatively related to effectiveness. They speculated that teams with high levels of conflict confer more frequently to reduce this conflict.

Instead of communication frequency, this study focuses on the degree to which members communicate openly to one another. Stewart and Barrick (2000) found that open communication was related positively to supervisor ratings of the teams' work quality and quantity. With open communication, team members will tolerate, encourage, and engage in frank expression of views. Conversely, a team that communicates frequently but hides information will not achieve the desired goal of information exchange. Frequent communication is also costly in terms of time and effort. Open communication facilitates decision making as members become aware of hidden assumptions and decision quality improves when teams explore and evaluate alternative courses of action (Schultz, Ketrow, and Urban, 1995). In addition, we expect that a team that practices open communication will benefit most if it is also diverse. A diverse team has access to more information and open communication facilitates the team's ability to realize this information potential.

Hypothesis 3a: Open communication is positively related to (i) perceptions of team viability and (ii) member satisfaction in nascent ventures.

Hypothesis 3b: The positive relationship of open communication on (i) perceptions of team viability and (ii) member satisfaction is greater for diverse teams.

Social integration is a multifaceted phenomenon that includes social interaction, group pride, and spirit (Smith *et al.*, 1994). Teams high in social integration experience higher member satisfaction, do better at coordinating tasks (Smith *et al.*, 1994), and report higher team viability (Barrick *et al.*, 1998). Consistent with past research, we expect social integration to positively predict perceptions of team viability and member satisfaction. We also examine how social integration moderates the effects of team processes and inputs. Both diversity and open communication enable the team to gain access to more information. Socially integrated teams are better at integrating a wider range of information before the negative effects of information overload such as confusion and disagreements set in. This is because members of socially integrated teams are psychologically linked with one another in pursuit of a common objective (Harrison, Price, and Bell, 1998; O'Reilly *et al.*, 1989).

While diversity can lead to less cooperative teams (Chatman and Flynn, 2001), being socially integrated can mitigate this negative effect.

Hypothesis 4a: Social integration is positively related to (i) perceptions of team viability and (ii) member satisfaction in nascent ventures.

Hypothesis 4b: The positive relationship of diversity on (i) perceptions of team viability and (ii) member satisfaction is greater for teams high in social integration.

Hypothesis 4c: The positive relationship of open communication on (i) perceptions of team viability and (ii) member satisfaction is greater for teams high in social integration.

METHODS

Sample and procedures

The sample comprised venture spin-offs from a business plan competition organized by a university in 2000 and in 2002. Four months after the competition, 59 teams took steps to start a new business. Three teams did not wish to participate and data collection was initiated for 56 teams. Teams were asked through e-mail to identify and to provide contact information of members that were active in the team. Teams (19 teams) in 2002 were asked to indicate membership changes and only two teams had changes. Therefore composition was stable before and after the competition. The 2002 teams were also asked after the competition to indicate their reasons for joining the competition. To reduce social desirability bias, this question was asked after the competition. Sixteen teams reported that they believed they had a workable idea and hoped to find investors. Only three teams were merely testing if their ideas might work. Most teams therefore were seriously exploring the possibility of starting a venture.

Data were collected through a web-based questionnaire in 2000 and through telephone interviews in 2002. The questionnaires were customized for each team by including the names of team members. This ensured that individuals had a common team referent when answering the questions and was consistent with past team research (e.g., Ancona and Caldwell, 1992). Demographic

information was also collected. Of the 193 questionnaires distributed, 150 were returned (78%). All teams responded but in five teams only one response was turned in and following past team research (e.g., Simons *et al.*, 1999), these teams were omitted from the analysis. Thus, the final sample comprised 51 teams. We compared respondents and non-respondents in terms of team size, gender, and educational discipline. Separate *t*-tests showed that these groups did not differ. While there could be differences among early and late respondents, this information was not captured in this study.

Measures

Educational background diversity

Based on a survey of various diversity indices (Harrison and Sin, 2005), and following Tsui, Egan, and Xin (1995), we found that the Teachman Index was most suitable for our data. We did not use the Blau Index because it is sensitive to the underlying frequency distribution that results in left-skewed distributions (Tsui *et al.*, 1995). This makes the Blau Index unsuitable for this study where in some teams all members fell into the same category. The Teachman Index has a flat sensitivity to the underlying distribution and was calculated by

$$H = - \sum_{i=1}^s P_i (\ln P_i)$$

where P_i represented the fraction of members in each category.

We used educational type diversity over other diversity types such as gender and educational quantity. This is because, consistent with past work on new ventures (e.g., Roberts, 1991), there are limited differences in these characteristics. Following Hambrick *et al.* (1996), educational background was coded into 10 areas including that of computer science, engineering, science, and business administration. We coded them based on the respondents' highest educational level. For members who did not respond to the questionnaires, we used records submitted to the competition organizers.

Presence of distinct leader. We adapted Karakowsky and Siegel's (1999) scale. Each member

was asked to rank all members on the level of leadership shown. Thus, in a five-member team, the rankings ranged from 1 to 5, with the person ranked 1 showing the highest leadership level. A team was considered to have a distinct leader when all members ranked the same member as 1. These teams were coded 1 and teams with no distinct leaders were coded 0. In the sample, 28 (55%) teams had distinct leaders.

Social integration. This was measured using a nine-item, 7-point scale developed by Smith *et al.* (1994). Sample items included 'The members of the team are quick to defend each other from criticism by outsiders,' 'The success of other members of the team help me achieve my own objectives,' and 'Everyone's input is incorporated into most important company decisions.' Scale α was 0.69 and removing the first item increased reliability to 0.70. However, we used the original nine-item scale since the increase in reliability was marginal and the original scale has been used in previous research.

As the ratings were collected at the individual level, we aggregated them to the team level. Individual responses should not be aggregated unless team members provided relatively similar ratings (James, Demaree, and Wolf, 1984). R_{wg} (James *et al.*, 1984) for each team was calculated and values of at least 0.70 are usually considered as indicators of agreement. Mean r_{wg} value was 0.89, with 48 of 51 estimates exceeding 0.70 and 39 exceeding 0.90. These values indicated a sufficiently high level of agreement among team members to justify aggregating individual responses to a team-level construct. We averaged the scores for each team with a mean social integration of 5.59 (range of 4.15 to 6.56 and standard deviation of 0.49).

Open communication. We used a four-item, 7-point instrument developed by Stokes (1983). Sample items included 'There are certain topics which my group avoids talking about' (reverse coded), and 'My group is very straight-forward with me' with α of 0.65. Average r_{wg} was 0.85, with 43 estimates exceeding 0.70 and 38 exceeding 0.90. We aggregated the individual scores to team scores. The average score at the team level was 5.37 and ranged from 4.00 to 6.63 with standard deviation of 0.67. Although α was moderate at 0.65, it compared favorably to Druskat and Wolff (1999), who reported an α of 0.56.

Perceptions of team viability and member satisfaction

To be consistent with past work on teams (e.g., Hackman, 1988), we used team viability and satisfaction to represent perseverance.

Perceptions of team viability. A seven-item, 7-point Likert scale instrument developed by Hackman (1988) was used. Sample items included 'Members of the team care a lot about it, and work together to make it one of the best,' 'Working with members of the team is an energizing and uplifting experience,' and 'As a team, this work group shows signs of falling apart' (reverse coded), with α of 0.75. Mean r_{wg} value was 0.89 with 47 out of 51 estimates above 0.70 and 41 exceeding 0.90. At the team level, viability ranged from 4.14 to 6.50, with mean of 5.58 and standard deviation of 0.59.

Satisfaction. A three-item instrument, 7-point scale developed by Hackman (1988) was used. The items were 'Generally speaking I am very satisfied with the team,' 'I frequently wish I could quit the team,' and 'I am generally satisfied with the work I do on the team,' with α of 0.71. Average r_{wg} value was 0.94 with 49 out of 51 estimates above 0.70 and 47 above 0.90. At team level, satisfaction ranged from 4.33 to 7.00 with mean 5.89 and standard deviation 0.57.

Control variables

Team size. Size influences intrateam processes; for instance, larger teams have lower cohesion (Bantel and Finkelstein, 1991). Size ranged from 2 to 8 with a mean of 3.39, median of 3 and

standard deviation of 1.43. On the whole, there were 16 (31%) teams with two members, 15 (29%) with three members, 11 (22%) with four members, 6 (12%) with five members, 1 (2%) with six members, and 2 (4%) with eight members.

Competition results. Member perceptions could be affected by the competition results. Teams that did not get into the semi-finals were given a code of 0 and those that did were coded as 1. Of the 51 teams in this sample, 14 (28%) teams went into the semi-final stage of the competition.

Change in business plans. Some teams had changed their original plans submitted for the competition. These teams could be discouraged since they were further behind the start-up phase. Fifteen (29%) changed business plans and were coded as 1 and the others were coded as 0.

RESULTS

The data analysis was conducted at the team level. The means, standard deviations, reliabilities, and intercorrelations of the variables are presented in Table 1. We checked for the presence of multicollinearity using the method used by Pelled, Eisenhardt, and Xin (1999). The correlations among the predictors, i.e., both team inputs and intrateam processes, were reviewed. The correlation between social integration and open communication had the largest magnitude of 0.46. None of the correlations exceed 0.6, where multicollinearity might pose a problem (Kennedy, 1992).

Results of the regression analyses are presented in Table 2. Models 1 and 4 regressed the control

Table 1. Means, standard deviations, reliabilities, and intercorrelations of study and control variables

Variable	Mean	S.D.	1	2	3	4	5	6	7	8
1 Distinct leader ^a	0.56	0.50								
2 Educational diversity	0.55	0.46	-0.20							
3 Open communication	5.37	0.67	-0.29*	-0.04	(0.65)					
4 Social integration	5.59	0.49	-0.04	-0.25	0.46**	(0.69)				
5 Perceived team viability	5.58	0.59	-0.08	-0.02	0.69**	0.70**	(0.75)			
6 Member satisfaction	5.89	0.57	0.19	-0.19	0.54**	0.71**	0.79**	(0.71)		
7 Team size ^b	3.39	1.43	-0.34*	0.27	-0.10	-0.20	-0.26	-0.27		
8 Competition results ^{a,b}	0.27	0.45	-0.17	0.11	0.13	-0.07	-0.02	-0.05	0.05	
9 Change in business plans ^{a,b}	0.29	0.46	0.05	-0.20	0.13	0.08	0.06	0.18	0.06	-0.11

Coefficient alpha estimates of reliabilities are in parenthesis.

^a Dummy variables; ^b control variables.

* $p < 0.05$; ** $p < 0.01$. All tests are two-tailed

Table 2. Results of regression analyses of team inputs and intrateam processes variables on perceived team viability and member satisfaction

Variables	Perceived team viability			Member satisfaction		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Distinct leader ^a		0.06	0.05		0.31*	0.27*
Educational diversity ^c		0.18*	0.18*		0.05	0.05
Open communication ^c		0.48**	0.47**		0.35**	0.34**
Social integration ^c		0.51**	0.50**		0.55**	0.53**
Team size ^b	-0.26*	-0.13	-0.15	-0.28	-0.03	-0.08
Competition results ^{a,b}	0.02	-0.05	-0.05	0.00	0.00	-0.01
Change in business plans ^{a,b}	0.09	-0.01	0.00	0.22	0.09	0.11
Communication × Diversity			0.05			0.15
Integration × Diversity			0.00			0.04
Integration × Communication			-0.01			0.00
R^2	0.07	0.71	0.71	0.12	0.66	0.69
Adjusted R^2	0.01	0.66	0.63	0.06	0.60	0.60
F -statistics	1.20	14.36**	9.44**	2.04	11.45**	8.48
	$F(3,46)$	$F(7,42)$	$F(10,39)$	$F(3,46)$	$F(7,42)$	$F(10,39)$
R^2 change		0.63**	0.00		0.54**	0.03
		(compared to Model 1)	(compared to Model 2)		(compared to Model 4)	(compared to Model 5)

Coefficients are standardized. ^a Dummy variables; ^b control variables; ^c centralized variables

* $p < 0.05$; ** $p < 0.01$. All tests are one-tailed

variables with perceived team viability and satisfaction. The control variables were not related to perceived team viability ($F_{(3,46)} = 1.20$, n.s.) and satisfaction ($F_{(3,46)} = 2.04$, n.s.). Adding team inputs and processes in Models 2 ($F_{(7,24)} = 14.36$, $p < 0.01$) and 5 ($F_{(7,24)} = 11.45$, $p < 0.01$) resulted in significant increase in R^2 . The ΔR^2 was 0.63 for team viability and 0.54 for satisfaction. Models 3 and 6 examined the interaction effects of team input and processes. To reduce multicollinearity in the use of multiplicative scores we followed Aiken and West's (1991) recommendation by 'centering' the independent variables before entering them into the regression equations. Adding the interaction terms did not increase R^2 significantly. Hence, Models 2 and 5 are more parsimonious and we used these to interpret the findings.

Presence of distinct leader was positively related to satisfaction (beta = 0.31, $p < 0.05$), but not to perceived team viability (beta = 0.06, n.s.). Educational diversity was positively related to perceived team viability (beta = 0.18, $p < 0.05$) but not to satisfaction (beta = 0.05, n.s.). Hence there was partial support for Hypotheses 1 and 2. Supporting Hypothesis 3a, open communication was positively related to team viability (beta = 0.48, $p < 0.01$) and satisfaction (beta = 0.35, $p < 0.01$). Social integration was positively related to

perceived team viability (beta = 0.51, $p < 0.01$) and satisfaction (beta = 0.55, $p < 0.01$), thus supporting Hypothesis 4a. Since the interactions were not significant, Hypotheses 3b and 4b and 4c were not supported.

As the correlations between perceived team viability and member satisfaction were high ($r = 0.79$), we conducted a confirmatory factor analysis to determine if the two variables could be combined. The analysis showed that a two-factor model that represented both perceived team viability and satisfaction (chi-square = 124.38, d.f. = 34, IFI = 0.92, CFI = 0.92, NNFI = 0.90, SRMR = 0.086) did not provide significantly better fit than the one-factor model that represents overall the indicators for perceived team viability and member satisfaction (chi-square = 124.66, d.f. = 35, IFI = 0.92, CFI = 0.92, NNFI = 0.90, SRMR = 0.086). The chi-square difference was only 0.271 (n.s.). We reran the regressions using a 10-item scale (α of 0.83) comprising seven questions from perceived team viability and three from member satisfaction. The results remained the same but distinct leader and educational diversity were marginally significant at $p < 0.10$. Given these findings, future work can consider using a scale combining perceived team viability and member satisfaction.

DISCUSSION AND CONCLUSION

Upper echelons theory shows that characteristics of the top management team influence organizational effectiveness (e.g., Wiersema and Bantel, 1992). We extended this work to nascent ventures and found that educational diversity, the presence of a distinct leader, open communication, and social integration were positively related to perceived team viability and member satisfaction. While past research (e.g., Smith *et al.*, 1994) used communication frequency, this study showed the need to capture how a team communicated. Past studies focus on leadership styles or the division of work among different leaders. We showed that the presence of a distinct leader influences effectiveness. We do not disagree that characterizing the type of leadership can be useful to predict team effectiveness. Instead, we contribute to the literature by demonstrating that in nascent ventures it is useful and perhaps necessary to have a distinct leader.

Partially supporting our hypotheses, team inputs and intrateam processes were related to perceived team viability and member satisfaction, though not without some variation. Diversity was positively related with perceived team viability but no satisfaction effects were found. Diversity increases cognitive resources that in turn improve a team's problem-solving ability (Bantel and Jackson, 1989). A possible reason why diversity did not relate to satisfaction is the similarity-attraction effect. Individuals with similar backgrounds share common life experiences and values and will find the experience of interaction with one another easier, positively reinforcing, and more desirable (Williams and O'Reilly, 1998). Hence the sense of satisfaction derived from task achievement as a function of diversity might at the same time be nullified by the lower degree of interpersonal attraction. Future research might find it beneficial to further differentiate the effects of diversity on different team outcomes.

Presence of a distinct leader was related to greater satisfaction but not to perceived team viability. Positive effects were expected because the leader helps members focus actions on a common goal. Peterson *et al.* (1998) found that leaders of successful teams were more explicit about their preference and were also more likely to persuade others of their views. Focusing on a common goal is important for a nascent venture that faces an uncertain and dynamic environment. A possible

reason that perceived team viability effects were not found was that members may not agree with the leader's direction. Perhaps leaders should first convince members of the idea's merits and allow them to debate the idea. Only after all views are heard should the leader step up and make a decision. This increases acceptance of the leader's decision. Strong leaders may get to have their cake and eat it too—they make sure that individual voices are influenced before they speak out, and they shape interpretations of the environment in ways that make people come to the same conclusions.

Previous work focuses on communication frequency (Smith *et al.*, 1994) and found that it was negatively related to team effectiveness. They conjectured the reverse causation where teams in trouble increased communication to resolve differences. Instead, we believe that *how* a team communicates is often more important than *how much* a team communicates. As predicted, we found that open communication was positively related to both perceived team viability and satisfaction. Interpersonal interactions are improved when members openly communicate with one another. Open communication also allows members to share information that enable the team to consider different aspects of an issue. A limitation was the moderate α of 0.65 for this variable (which compared favorably to Druskat and Wolff's reported α of 0.56). Since low alphas will attenuate the effect sizes (Hunter and Schmidt, 1990; Pedhazur and Schmelkin, 1991), and make it more difficult to find significant relationships, the low reliabilities in some of the measures, coupled with our relatively small sample size inherent in most team-based research, may be the reasons why we failed to find support for our hypothesized interaction effects.

The results should be interpreted with caution since common method variance could inflate the bivariate correlations between psychological variables (Taber and Taylor, 1990) and might have affected some of the findings. While the effects of common method variance of social integration on perceptions of team viability and member satisfaction could not be ruled out entirely, our findings were consistent with past research (e.g., Smith *et al.*, 1994). As a way to test the robustness of the findings related to open communication, we reran the analysis using the lowest member rating on open communication. The results remained the same in this follow-up analysis. It was unlikely

that common method bias affected the findings for educational background diversity since education diversity captures objective information. Common method bias was also unlikely to affect the findings for distinct leadership as team members did the rankings individually and did not know how other members did the rankings. Furthermore, additional analysis using percentage of leadership agreement did not change the findings.

The study examines perceived team viability and member satisfaction as outcome variables. As noted in the introduction, these outcomes could affect team perseverance, even if the perceptions are due to distorted perceptions which can come in the form of risky decisions, biases (Keh, Foo, and Lim, 2002), and the rationalization of team decisions (Turner and Pratkanis, 1998). Despite this limitation, at such an early stage, it might be more important for the teams to persevere through hardships so that the venture has a chance of proceeding to the next stage of development. It is also not certain if factors that positively influence team outcomes translate to better outcomes in later stages of firm development. For example, Audia, Locke, and Smith (2000) found that decision-makers are often constrained by their past actions. That is, decision-makers tend to persist with strategies that worked in the past despite radical changes in environmental demands. This tendency to rely on past strategies is greater when there is time pressure to make quick decisions (Perlow, Okhuysen, and Reppenning, 2002).

Overall, this paper contributes to the research on teams and in particular to the research on teams in the early stages of a new venture. These early stages might differ from later conditions in a number of ways: for example, the team's purpose, its members' roles, and the environmental support are all in flux. This study provides an exploration of factors that shape outcomes, as measured by perceptions of team viability and member satisfaction at this stage of venture formation. Future studies can use other outcome measures such as successful launch of a product or service, positive cash flows, or profits for later stages of new venture development. In addition, future studies can examine what factors differentiate teams that disbanded vs. teams that did not disband. Finally, future work can also study how teams utilize external contacts since these contacts shape the resources available to the teams (Leung *et al.*, 2005). Collectively, these studies can enable us to get a better understanding

of what shapes effectiveness of new ventures at different stages of development.

In sum, we hope this paper will help spur the research on venture teams, especially those that are in their early stages of firm formation. We reckon that such a stream of research is arguably in its nascent stage of development too.

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