

6-10-2017

ENTREPRENEURIAL TEAM PROFITABILITY AND STRATEGIC DECISION MAKING QUALITY: DIVERGENT EFFECTS OF HOMOGENEITY

Tomas Karlsson

Chalmers University of Technology, Sweden, tomas.karlsson@chalmers.se

Pamela Nowell

Chalmers University of Technology, Sweden

Recommended Citation

Karlsson, Tomas and Nowell, Pamela (2017) "ENTREPRENEURIAL TEAM PROFITABILITY AND STRATEGIC DECISION MAKING QUALITY: DIVERGENT EFFECTS OF HOMOGENEITY," *Frontiers of Entrepreneurship Research*: Vol. 37 : Iss. 8 , Article 3.

Available at: <https://digitalknowledge.babson.edu/fer/vol37/iss8/3>

This Paper is brought to you for free and open access by the Entrepreneurship at Babson at Digital Knowledge at Babson. It has been accepted for inclusion in Frontiers of Entrepreneurship Research by an authorized editor of Digital Knowledge at Babson. For more information, please contact digitalknowledge@babson.edu.

ENTREPRENEURIAL TEAM PROFITABILITY AND STRATEGIC DECISIONMAKING QUALITY: DIVERGENT EFFECTS OF HOMOGENEITY



Tomas Karlsson, Chalmers University of Technology, Sweden

Pamela Nowell, Chalmers University of Technology, Sweden

ABSTRACT

This paper is about entrepreneurial teams. It addresses team composition by investigating the relationship between group value consensus and performance. By doing so, it contributes to previous research on entrepreneurial teams in three ways: We provide insight into how entrepreneurial teams can be composed for improved outcomes. Second, we look specifically at the role of a team's work value composition on their performance. Third, we investigate 48 randomly generated teams in a quasi-experimental setting as opposed to organically formed teams commonly found in other team composition studies. Our study finds that while value homogeneity is beneficial for the performance of internal tasks, it is detrimental to the performance of external tasks. These findings create important implications for entrepreneurial team composition.

INTRODUCTION

While much of entrepreneurship research traditionally takes the perspective of an individual entrepreneur, many new ventures are actually started as a team effort. Not only do team-based start-up initiatives engage more individuals than solo start-up efforts, team start-ups are on average more successful in making it through the nascent phases of venture creation (Reich 1987; Ruef, Aldrich and Carter, 2003), and in securing venture financing (Alsos, Isakssen and Ljunggren, 2006). This paper is about these entrepreneurial teams and addresses the team composition – performance relationship in new venture creation.

This study contributes to research on entrepreneurial teams in three distinguishing ways: first, this study investigates the effect of homogeneity in work values on team performance. To the best of the authors' knowledge this has yet to be done for teams within entrepreneurship literature. While most entrepreneurial team composition studies look at diversity along demographic and human capital dimensions, this study investigates a deep compositional variable (values). Deep variables such as individually held values likely have a more direct influence on team processes by encouraging, for example, affective conflicts (Jehn, 1994). These types of variables are particularly interesting to study in the beginning of new venture creation when teams are newly formed as teams have yet to establish a pattern of behavior and it is possible that deep variables have yet to be fully revealed.

Second, this study tests the contextual influence of *task type* on the composition – performance relationship. Entrepreneurial team composition studies to date have provided inconclusive findings as to the impact of team diversity on firm performance and studies have suggested these performance variations could be a result of differences with respect to task, time, context and situation (e.g. Devine and Philips 2001, Ensley and Pearce 2001, Ensley and Hmieleski 2005). In a recent review of entrepreneurial team literature, Klotz et al. (2014) urge researchers to consider contextual and situational factors. While some recent studies have begun to do so (e.g. Eesley, Hsu,

and Roberts 2014) this approach has yet to be widely adopted. Our study shows that group value consensus has statistically significant but diametrically opposite effects on performance when two types of tasks are taken into consideration: external and internal tasks.

Lastly, we investigate designed teams in an educational setting as opposed to organically formed teams commonly found in other team composition studies (e.g. Eesley, Hsu, and Roberts 2014, Beckman, Burton, and O'Reilly 2007, Beckman 2006). While entrepreneurial teams are commonly assumed to form organically from a social network of individuals, designing teams allows us to improve our understanding of entrepreneurial team composition by removing confounding factors; the teams in this study are constructed such that they have similar starting conditions and our quasi-experimental design allows us to focus on explaining distinct task dependent differences in performance of entrepreneurial teams.

We therefore ask the following in this study: *How does entrepreneurial team value homogeneity influence performance on different types of tasks?*

THEORY AND HYPOTHESIS

Previous research into group value homogeneity has established that consensus among a team in terms of their values has positive effects on a team's performance (Jehn, 1994). Value homogeneity has been associated to friendship, attraction, communication, and a decrease in destructive affective conflicts, while value heterogeneity is seen to make group work be perceived as less pleasant and more difficult. This pattern has been seen when groups are evaluating their own efficiency as well as in supervisory evaluations (Harrison, Price, and Bell 1998). One of the main mechanisms of value homogeneity is the dampening effects on task and emotional intragroup conflict (Jehn 1994, 1995). Reduction of emotional intragroup conflict has consistently positive effects on group performance, while reduction of task conflicts has various outcomes, ranging from negative to positive. While the relationship between value consensus and performance has been shown to have a positive association, these analyses have mostly been done on what researchers conceptualize as 'internal' tasks.

Internal vs. External tasks

Ancona and Caldwell (1992) identify distinct differences between the external and internal activity of a group. First, team members themselves identify tasks and processes as having an internal and external component; some behaviors take place among the groups' members and others take place external to the group, with outsiders. Second, the authors show that while internal tasks follow the general pattern of linkage between team processes and performance, e.g. intra group communication, supportiveness, active leadership and training all having a positive impact on performance, external task performance was not related or negatively related to these factors (Gladstein 1984). Third, while internal group processes predicted team-member satisfaction and team-rated performance, external processes predicted sales revenue, an objective, external measure of performance. Thus, an aspect of group process that was absent in the literature (external processes) affected organizational performance in ways that internal processes did not (Ancona and Caldwell 1992).

Entrepreneurial teams perform a variety of both internal and external tasks, often in parallel. Internal tasks such as generating ideas, analyzing a potential market, or writing a business plan, are all done within the boundaries of the team and the organization, since entrepreneurial teams often

are the organization. However, external tasks such as customer development, sales, and financing the venture are done externally, both to the team and the organization. Thus, consistent with established literature, value homogeneity should have a positive impact on the performance of internal tasks for an entrepreneurial team as team members are interacting only or predominantly with each other, increasing the potential for detrimental conflict within the group. Consequently, we predict:

Hypothesis 1: Entrepreneurial team value homogeneity is positively related to performance of internal tasks

As external tasks require team members to interact with outsiders as opposed to or in addition to their team members, this may act to limit the amount of conflict the team experiences. In addition, external tasks may have a tangible element to them that may be lacking in internal tasks. This may act to provide a sense of urgency or 'realness' that works to sideline conflict and keep team members focused on the task at hand, thus allowing teams to reap the rewards of diversity. Thus, we predict that:

Hypothesis 2: Entrepreneurial team value homogeneity is negatively related to performance of external tasks

METHOD

We quantitatively investigated the statistical relationships between group value consensus and performance. While our unit of analysis was the team, respondents were individuals in groups of 4-7 who performed two entrepreneurial tasks; one external (dubbed the 'Cash' task) and one internal (dubbed the 'Case' task). Both tasks are described further in the following section and were performed by newly formed teams where the teams had one week to complete the task. The tasks were entrepreneurial in nature, requiring intensive coordination and strategic decision making, and were open-ended involving fuzzy problem solving, undetermined leadership structures and communication that would benefit from close proximity of team members.

Sample

The sample consisted of two classes of students (2014 and 2015), comprising 118 individuals in total. Each student engaged in the external 'Cash' task and the internal 'Case' task in a consecutive manner. However, entirely new group constellations were created between the tasks. This means that new group value consensus scores were calculated for groups in-between the two tasks, as they were comprised of entirely new individuals. The average team size was 4.92 where 16% of the students were foreign, 45% were female, and the average age was 25.6 years. No significant differences were identified between the two cohorts. Participants were aware that their performance was documented in both tasks, but unaware of the hypothesis of the study. Both tasks had the duration of one week, and were conducted in the first three weeks of the program.

This quasi-experimental set up enables us to achieve some benefits of control as in the laboratory, and some benefits of generalizability as in field studies (Jehn, 1994; Campbell and Stanley, 2015).

Description of the external and internal tasks

As the tasks were carried out within the context of an education they were pedagogical in nature. The 'Case' task is an internally oriented task where teams are instructed to act as 'business developers/Intellectual asset managers' and analyze given information about a developing technology (over 17 pages of background on potential applications, future development needs etc.). Teams are tasked with delivering a business plan and viable business strategy within one week based on the given information. This Case task typically does not involve interaction with external stakeholders. The external 'Cash' task is modeled after Tina Seelig's dollar challenge (Selig, 2009). In this task the students receive the equivalent of 12 USD, and in one week are expected to generate as much money as legally possible. This task typically involves a high degree of interaction with external stakeholders (potential suppliers and customers). For more details on either of the tasks please contact the authors.

Dependent variables

The dependent variable in both tasks was performance however these were measured differently due to the nature of the tasks. The dependent variable extracted from the internal Case task was an expert judgement of the team's performance on the case (grading on a 10 point scale). Grades on the Case task ranged from 5/10 through to 9/10. Performance for the Cash task was measured in terms of profitability, which ranged from 46 USD to 1825 USD.

Independent variables

To measure value homogeneity in teams we followed Jehn (1994) and utilized the 54 item Organizational Culture Profile (O'Reilly et al. 1991) that identifies individuals' work related values. The method has respondents sorting and hence prioritizing 54 work-related values into nine categories according to a normal distribution pattern (2-4-6-9-12-9-6-4-2) with fewer items at the very high and very low end of preference. For details on this survey tool, please see (O'Reilly et al. 1991). In line with Jehn and Mannix (2001) we calculated Jehn/Mannix group value consensus, using the Spearman-Brown prophecy formula. The group value consensus, represented by group coefficient alphas ranged from 0.31-0.85 in the cash exercise, and between 0.49-0.86 in the ideation exercise. Relative to prior research on group value consensus (e.g. Jehn, 1994), we have a high degree of consensus in the groups. We ran a small survey asking prior students to grade the interdependence in both tasks. This indicated no clear difference in means, however the number of respondents were too low (6).

RESULTS

Results support H1. However, the low improvement of Adjusted R² from model 2 to model 3, indicates that group value consensus adds but a little to the overall predictive power of the model. This indicates that group value consensus have a small but significant effect on performance on the internal Case task.

Results support H2. In the external Cash task, value homogeneity had a significant and negative effect on team performance (Adjusted R² 0.105; Sig 0.0003). Several of the control variables had significant influence on outcomes, such as age diversity and gender homogeneity which both had a negative effect on performance. Homogeneity in terms of nationality had a positive effect on performance in the third regression. The overall explanatory power of the model increases significantly from regression two, to regression three (from explaining 2.5% of the variation, to

26,1% of the variation), indicating the importance of group value dissensus in the performance of the external task. We also controlled for innovation type values in the organizational culture profile i.e. whether team members held the values of 'being innovative', 'being quick to take advantage of opportunities', 'willingness to experiment', and 'risk-taking'. However a higher mean value around these innovation type values had no significant effect on performance on either task, nor did higher mean values around more detail orientated values (e.g. 'being precise', 'being analytical', or 'paying attention to detail').

DISCUSSION AND CONCLUSION

Our main findings are that entrepreneurial team value homogeneity has distinctly different effects on performance contingent on the type of task being performed. Entrepreneurial teams with higher value homogeneity performed better in the internal task whereas teams with lower value homogeneity performed better in the external task. Thus, we extend that value heterogeneity is beneficial to external tasks (Ancona and Caldwell, 1992), also when entrepreneurial tasks are considered. This contributes to the entrepreneurial team literature by introducing the issue of group value consensus and showing its task contingent effects. These results have implications for the related top management team, and upper echelons literatures as well as the organizational teams literature as we challenge the general prediction that group value consensus is positively related to performance. Little or no prior work has addressed the role of task type as a moderator of the composition - performance relationship, in particular as regards entrepreneurial team work related values. Our work responds to calls such as Mathieu et al. (2014) and Klotz et al. (2014) to consider that the entrepreneurial team performance may be contingent on compositional alignment with the external/internal dimensions of task type.

These results have implications for entrepreneurial teams throughout their venture creation activities. First, entrepreneurial teams may need to be flexible in their team composition, or at least in the way that they assign team members to tasks as this research shows that the same team composition (in this case homogeneous values) can be beneficial to team performance in some tasks (internal) and detrimental to team performance in other types of tasks (external). Thus, entrepreneurial teams may need to be flexible, bringing in competence when it is needed and/or shifting around members based on the tasks at hand and the composition available within the team. Second, entrepreneurship literature typically conceptualizes these tasks as gestation activities (Carter, Gartner, and Reynolds 1996, Reynolds and Miller 1992), with some scholars arguing that there is a particular order in which these activities should take place (Delmar and Shane 2004). The results of the present study may have implications for teams throughout the phases of new venture creation as, allowing ourselves to speculate, venture creation activities may be predominantly internal in the earliest phases and transition to a more balanced, or even external nature over time. For example, early entrepreneurial teams may focus on team development, idea generation, business planning, or product development, while more mature entrepreneurial teams may focus on customer development, raising capital, or interacting with external individuals marketing and other legitimating activities. According to our study, value homogeneity would benefit performance in the former more internally oriented tasks and hinder it in the latter more externally oriented tasks. Contextual elements such as industry may also play a role in the types of tasks that entrepreneurial teams perform. Some industries may call for more, or longer, periods of internal work as opposed to external. For example, high tech sectors where internal R&D and product development are heavy or in medical industries where sectors are conservative, teams may spend more time and energy working internally before they work heavily with external

actors. Conversely, entrepreneurial teams working in software development or other 'fail-fast' lean start-up type environments with heavy external interaction may benefit from diversity earlier. These are fruitful avenues of inquiry that should be explored further

LIMITATIONS AND FUTHER RESEARCH

One limitation of our research is that we do not take into account the mechanisms or processes by which task type acts to moderate the value – performance relationship. An area of future research could therefore be to dig into whether and how external tasks are able to sideline affective conflict and capitalize on entrepreneurial team diversity. It would also be beneficial to more thoroughly consider how potentially differing levels or types of interdependence between team members in the different types of tasks may contribute to the findings. For example, Wageman and Gordon (2005) show that group values can actually shape a team's level of task interdependence. A second limitation and opportunity for future research is to incorporate temporal factors by relating our results to the evolving entrepreneurial team over time in different phases of the venture creation process. Time is an increasingly sought after component of team studies, and relating task type and team composition to gestation activities as well as performance episodes and action and transition processes (Marks, Mathieu, and Zaccaro 2001, Mathieu et al. 2014, Gersick 1988) would be a fruitful area of inquiry. A third limitation is the use of a single rater in the case assignment. In future studies this should be done with multiple raters and tests of interrater reliability. We also want to acknowledge the limited number of cases in this study. This makes a fine grained measure show greater effect sizes than a course grained measure such as Gender H and Swedish H. Lastly, we have not fully addressed how teams can respond to their value profile, i.e. how teams can learn and benefit from the knowledge that value homogeneity is conducive in internal tasks and hinders performance in external tasks. While team redesign is likely impractical, shuffling team members or assigning certain constellations of members to tasks may be possible. Future research in this area would be beneficial.

While these and other future areas of research are interesting and worthwhile, our results here contribute to existing efforts to understand under what conditions certain entrepreneurial team compositions are important, and others not. Our study is among the first to suggest that entrepreneurial teams could benefit from taking into account the alignment of their group value profile and task type when forming their team and throughout the process of new venture creation.

CONTACT: Tomas Karlsson; tomas.karlsson@chalmers.se; (T): +46 729 611 153; Department of Technology Management and Economics, Chalmers University of Technology, Gothenburg, 41296 Sweden.