

HOW DOES ORGANISATIONAL CULTURE AFFECT NPD IN A STARTUP?

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ABSTRACT

New product development is one the most important activities in an organisation. It is considered risky as well as complex, but needs to be undertaken for the survival and growth of organisations. Startups are those organisations that develop and launch new products and services in the market place . They are characterised by the presence of a founder member and a small set of employees. The literature on NPD highlight strategy, organisation culture, resouce availability and NPD process as success factors. Of these organisational culture is one of the most important ones and has been studied in detail. Prior studies on startups cover ecosystem, open innovation, knowledge and adversity management but there is hardly any study on what affects the NPD success in startups. Hence the focus of this study is to address this gap- to understand how organisational culture affects NPD in startups.

Through a combination of literature review and indepth interviews among 32 startup personnel, this article has arrived at a set of four propositions and a conceptual model on what affects NPD success in startups. Respondent sample was chosen from public databases and cross checks done by multiple researchers during transription, in order to ensure sufficient variance, reliability and replicability in the qualitative research. The four propositions that emerged were- Top management involvement, internal startup team cohesion, a flexible NPD process and a culture of failure tolerance. The empirical model shows the relationship between these and NPD success. The study's biggest contribution is its pioneering nature in this area of startup and NPD success. It also offers a theoretical contribution by way of model development and further research scope to validate the propositions, by converting them into hypotheses.

Managers and practitioners have immense learnings by way of what is the kind of culture they should put in place in order to succeed in Startups.

INTRODUCTION

New product introductions are vital for organisational survival, growth and sustained performance (Blundellet *al.*,1995). Due to its significance, the development of a new product is an important topic in the study of society, economics, engineering and organisations. In the last few decades, the number of new products developed and /or introduced has gone up significantly. Correspondingly, managing the new product development (henceforth called NPD) process has become a challenge for firms as it requires extensive financial and human resources and is time sensitive. The stark reality is that the majority of new product ideas never get launched in the market and those that do face a failure rate somewhere in the order of 25 to 45 percent (Cooper & Kleinschmidt, 2007). Despite the availability of a high amount of research on how to achieve success in NPD, firms continue to deliver products that fail and therefore NPD ranks amongst the riskiest and the most complex tasks for organizations.

According to Product Development Management Association (PDMA) best practices 2012 report (Markham and Lee, 2013), even though the percentage increase in sales from new products has gone up since 2004, the ratio between the number of market successes to the number of ideas has come down.

Factors Affecting New Product Success

This is arguably the most researched area within the NPD context. Ernst (2002) has done a comprehensive review of the literature on NPD Success factors for the previous thirty years. The most important findings of this study are- the presence of a formal or informal NPD process in the firm provides the basis for new product success. Additionally, the project concept, the target market and the perceived benefits of the new product by the customer in comparison with a competitor's product, must all be clearly described. Other factors are timely market information, a dedicated project organization, a cross functional NPD team with a strong project leader who has the freedom of operation. Senior management's recognition of the value of new products, reflected in adequate resource support for the NPD program, seems to have a positive effect on the success of new products. Very importantly, the NPD program ought to have a strategic framework which offers long term orientation to the sum of single NPD projects.

Importance of Organization Culture

Amongst the factor heads covered in literature regarding NPD Success, organization culture is arguably the most important. Organizational culture definition is "the way we do things around here" (Lundy and Cowling, 1996). This covers those beliefs and habits that contribute to the unique social and psychological aspects of the organization (Matear et al; 2010). Schein (1985) defines culture as a "*pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems*" (Schein 2010: 17).

There are several aspects of organizational culture that affect new product development. Goodman *et al.*, (2001), in their study on 'Competing Values Framework-Understanding the impact of organizational culture', make a case on how organization culture has an impact on organizational commitment and attrition. Leonard-Barton (1992) has researched the paradox of the new product team's requirements to manage core capabilities and core rigidities i.e. while core capabilities of a firm are those deeply entrenched set of skills and knowledge that help in new product development, their downside is that they can become too inflexible and rigid.

This can hamper the new product development activity. Dwyer & Mellor (1993) insisted that a certain amount of versatility, flexibility and organizational cohesion are all required for new product development. Firms with an innovative culture creates an atmosphere where entrepreneurship and risk taking are encouraged and rewarded and where individuals or teams are not punished when new products or services do not achieve the expected results. A climate of openness and informal communication is typical in these firms. (Massey & Kyriazis, 2007). Decision styles are another factor. During early NPD, the styles tend to be hierarchic, integrative and systematic while they are decisive and flexible during later NPD. Akgun and Lynn, 2002 argue

that team stability and teamwork facilitate team improvisation while having a clear goal acts as a detractor.

START-UP ORGANISATIONS

Startups play a key role in innovation processes (Colombo and Piva, 2008). Being a startup is usually a temporary state, where a maturing working history and market domain knowledge lead to the analysis of current working practices, thereby decreasing conditions of extreme uncertainty. They often face not only risk, but also unforeseeable uncertainty, which means the inability to recognize and articulate all relevant variables affecting performance. S. Blank (2010), who so far has contributed the most to the knowledge in this area, both theoretically and empirically, says it is a temporary institution seeking a profitable, measurable and also repeatable business model. They may be small companies but they are important for national economies as it contributes to job creation, productivity and economic growth (Parker & Praag, 2009).

According to Small Business Trends, an estimated, 90% of new startups fail. Around 35% of startups close within their first two years, over 50% of businesses make it to their fifth year and only 25% of businesses make it to the 15-year mark.

Why Is Organizational Culture Important In A Startup?

A key aspect of organizational culture is its entrepreneurial spirit that affects NPD positively (Mckelvey and Lassen, 2013). Most start-ups have entrepreneurs at the helm and have a set of challenges ((Lumpkin and Dess, 1996) that are unique to the owner founder decision and management style. These are most evident in aspects of new product development where the fundamental risk orientation of the company comes to the fore. One is that they have limited resources (Envick & Wall-Mullen, 2008). This forces them to have a high order of effective and efficient new development practices and moderates the relations between strategy and growth (Lin *et al.*, 2006). Whether an organization is run by an entrepreneur or not affects the organizational culture significantly and hence has a bearing on new product development. Since startups are often run by a small team working closely together, their “*culture*” is typically a reflection of the founding team's passions and personalities. In most situations, each individual working in a startup contributes to the overall culture.

Prior Research On Start-Ups

The prior researches on start-ups, though cover a few aspects, have not focused comprehensively on what factors may lead to NPD success in these organizations. Kuckertz et al (2020) have talked about adversity management in startups and have analyzed policy initiatives that can serve as a support to these set ups. Usman and Vanhaverbeke (2017) describe through case studies, how to manage open Innovations in startups successfully. Spender et al (2019), give a detailed literature review on open innovations in startups. Oliva & Kotabe (2019) present the main barriers, practices, methods and knowledge management tools in startups that gear up to meet the demands of a business environment of high volatility, uncertainties, complexity and ambiguity. Mayer et al. (2017) talk about the eco system required for students to flourish in the startup space. Baraldi et al. (2019) highlight how network embedding processes are connected in a startup

organization. Baumbach et al. (2018) study how start-ups should design go-to-market strategies to facilitate the adoption of e-innovations.

However, there is no study that has been done to understand what maybe the factors that affect NPD outcomes in startup organizations.

RESEARCH OBJECTIVE

This study aims to understand what are the organizational culture factors that affect new product outcomes in startup organizations.

METHODOLOGY

Since the study focus was on how organizational culture affects NPD outcome in startups, we decided to conduct in-depth interviews with the organizations. These were descriptive in nature and were conducted using a semi structured questionnaire guide. The guide was developed based on literature available on NPD and organization culture (very little is known in this context about startups).

Selection of Start-Ups and Employees

Startups for this study were identified from various public databases (to ensure representativeness) such as LinkedIn, Start-Up-India (NITI Aayog Database), AGBI (Atal-Greatlakes Balachandran Incubator) database, and personal referrals. The sample was then filtered using parameters for start-ups which have been founded with a maximum age of 3 years, with minimum of 5 employees and have generated some revenue (to ensure that they had market commercialisation of their new products). This set of start-ups were then contacted through mails and follow ups was done using Phone calls and Social media in order to get their responses for the study. The purpose of research and the methodology behind it was explained in order to maintain transparency between the parties, ensuring that this be only used for academic purposes. We finally selected 5 start-ups and 32 employees from the start-ups to proceed with further data collection.

Data Collection and Analysis Process

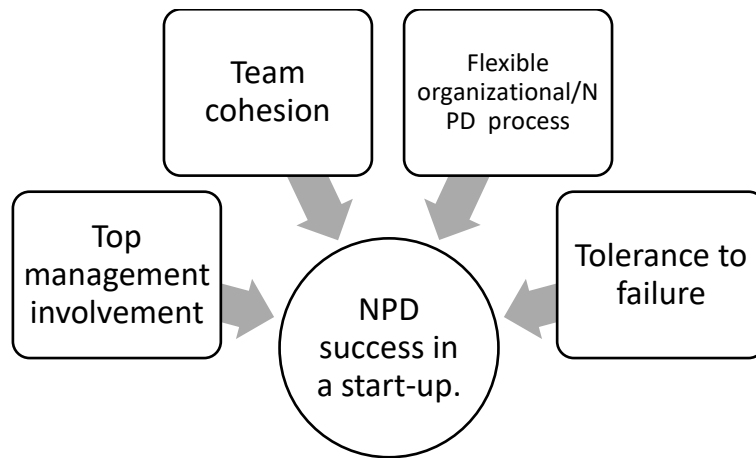
As in-depth interviews are rich source of qualitative data collection, we conducted the interviews through zoom calls. The respondent profile and company details are anonymized. We obtained consent from the employees and briefed them on the procedure and research process. Each interview went for about 45-60 minutes and were also video recorded for analysis purposes. The semi-structured interview guide was shared with the participants during the interview process and they were allowed sufficient time to answer. Unclear answers/answers requiring further information was probed further for clarifications. All the employees participated in the process were interviewed on – Organizational factors with specific emphasis on culture, facilitating NPD success. The interviews were conducted in English. The video/audio recorded responses were transcribed using research assistants. Further the transcripts were subjected to content analysis. Two research associates were assigned to read the transcripts again and again to come up with the common themes and mapped them with the conceptual arguments of the literature. All these ensured sample variance, reliability and replicability of the qualitative research.

FINDINGS

The sample responses from the employees and the themes emerged are tabulated in Table 1.

Table 1 EMPLOYEES SAMPLE RESPONSES		
S.NO.	RESPONSES	THEMES
1	For a start-up, I feel boss involvement is important	Top management commitment
2	It's all about founder and his dreams	
3	When I see the energy of my boss, I feel committed to my organization	
4	I like to work with like-minded people	Team cohesion
5	Even if I am not well, my team member will help me	
6	During our brainstorming session on new products, we appreciate each other's ideas.	
7	My boss has given complete freedom to me and my team	Flexible organizational /NPD processes
8	I won't say we have rigid processes, may be, because we are beginners, but this actually helps to ease the work.	
9	One thing I appreciate working in start-up is flexible work process.	
10	Our boss allows us to experiment	Tolerance to failure
11	It's all about trial and error, I love working here.	
12	We fail, we rise- This is my founder's motto and ours too.	

Based on the findings of the study, we have developed the conceptual framework as depicted in Figure 1 and developed four propositions, which can be subjected to empirical testing by future researchers as testable hypotheses.



**Figure 1
CONCEPTUAL MODEL**

Propositions

Four propositions emerged as output of the study.

Proposition 1: The involvement or commitment of top management is critical to the success of new product development.

Proposition 2: Team cohesion facilitates the success of new product development.

Proposition 3: Flexible organizational process enables the success of new product development.

Proposition 4: Tolerance to failure is critical to the success of new product development.

CONCLUSIONS AND IMPLICATIONS

New product development is a challenging activity for all organizations. Start-up organizations are those that continuously develop and launch new products and new services in the market place. Among all the factors that affect NPD, organization culture is the most important one, more so in startups, where the leadership style, decision making, risk taking and process orientation are all strongly influenced by the entrepreneur. Though there are a lot of studies on NPD success factors across organizations, there is very limited academic work in the area of NPD and startups.

Based on literature review and in-depth interviews with start-up organizational members, this study has arrived at a set of propositions regarding the organizational cultural factors that affect new product outcome in start-up firms.

The propositions are:

Proposition 1: The involvement or commitment of top management is critical to the success of new product development.

Proposition 2: Team cohesion facilitates the success of new product development.

Proposition 3: Flexible organizational process enables the success of new product development.

Proposition 4: Tolerance to failure is critical to the success of new product development.

There is also an empirical model that has been constructed, that explains how the factors may actually lead to NPD outcomes in a startup organization. In a start-up, the founder takes the highest ownership of the daily activities and this infuses the team with passion and energy. It is his instinct and gut feel that drive the new product projects. So it is not surprising that his level of involvement will have a high correlation with new product outcomes. Senior management can support managers and teams who work with front-end activities in various situations and in various ways (De Cleyn et al. [2015](#)). Similarly, the team in a startup is a very small and cohesive one. Many of them have joined the organization on the invitation of the founder himself or have been recommended by known sources. This creates high trust leading to commitment among the team members, in a startup. Teamwork culture among the organization helps to socialize the creativity of the team members for technological innovations. This helps to develop products that are fundamentally different for creating competitive advantage (Parboteeah et al, 2008). Attaining the desired cost, quality and time objectives of the newly developed products offer enriched team performance (Gemuenden & Lechler, 1997) essential for product innovation. Given the market urgencies, and the fact that startups typically start small, the NPD processes followed need to be flexible to deliver speed. More often than not, the processes are driven by the start-up entrepreneurs themselves, thus doing away with detailed rigorous testing protocols. And this flexibility and versatility affects NPD outcomes positively. Finally, startups need a lot of experimentation to succeed in the marketplace. They need a culture that is highly tolerant of failure, that will in turn encourage employees to try different methods with perseverance. This helps the start-ups succeed with the new products at the market place.

This study has several important implications. From a theoretical angle, this is a pioneering study to focus specifically on startups and organizational culture, in the NPD space. The propositions arrived at can each be tested for theoretical robustness and can enhance knowledge in this area. The empirical model can be validated statistically and hypothesis built. This can lead to far greater understanding on what factors will work to improve NPD success in startups.

From a managerial stand point, this study has immense implications. The startups can now focus on the proposition areas and ensure that they do justice. Each proposition itself- can be acted upon by the concerned manager/ leader and a close watch kept on those. For eg; the study has shown possibilities of NPD outcomes improving with flexible NPD processes- so it is important not to be rigid with these. Deviations can be overlooked as long as they have been done for a strong reason. Similarly, startups need to practice high failure tolerance in order to retain their innovativeness and hence success rates at the market place. Mistakes can be treated as stepping stones for future success. Keeping the employee team united and motivated is very important in startups. Informal gatherings, team incentives, regular communication- all contribute towards this. Finally, in a startups the CEO is the CIO i.e. Chief Involvement Officer. He needs to lead from the front and this energizes the entire startup, thus improving chances of NPD success.

FUTURE RESEARCH AND STUDY LIMITATIONS

Future research can focus on validating the propositions and the empirical model and thus arriving at a new theory in the context of ‘organization culture affecting NPD in a startup’. This data was collected in one geography in India, so adding geographies will enhance representativeness of findings. Looking at start-ups in different domains may also throw up interesting insights- for e.g. Software services startup versus consumer products start-ups. Finally, analyzing different sizes of start-ups and their NPD may also serve as an important future learning area.

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