

AMBIDEXTERITY AND PRODUCT INNOVATION

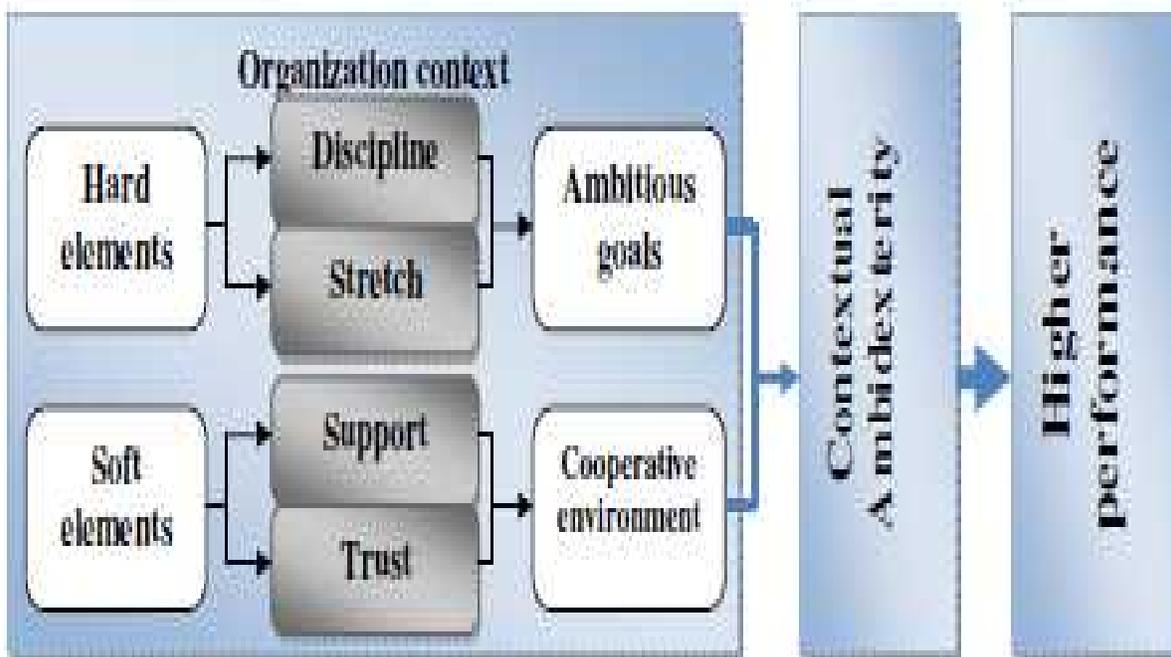
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Ambidexterity and Product Innovation

The term ambidexterity refers to the ability of a firm to handle two opposing activities at a time. Product innovation is the generation of new product, changes made to the design of the existing products or addition of a component or a material to an existing, established product. The study is a review of literature on various facets of ambidexterity and innovation.

Chaharmahali, S. M., & Siadat, S.A., (2010) in their study cited that there were four organization context attributes that were necessary to establish ambidexterity in an organizational/ business unit. They also stressed that four interrelated features of an ambidextrous context are discipline, stretch, support, and trust. Discipline is an attribute that encourages people to achieve what they are supposed to do. Stretch indicates a context in which people are willing to achieve more ambitious goals. Support implies a context in which people are encouraged to help and tolerate each other. Trust is a characteristic that creates a reliable working environment. The first two characteristics are considered as hard elements of organizational context that result in an efficient organization with determined, ambitious goals and the last two attributes are considered as soft elements of organizational context that create and enhance a supportive, cooperative environment. The balanced combination of all these four elements results in a contextual ambidexterity. They expressed organization context as ‘ambidextrous context’. The elements and attributes of an ambidextrous context are displayed in the figure 2.3. They found that contextual ambidexterity and ambidextrous context, in turn, leads to higher performance.



Source: Chaharmahali, S. M., & Siadat, S. A. (2010). Achieving Organizational Ambidexterity (Understanding and explaining ambidextrous organisation).

Figure 2.3: Elements and attribute of an ambidextrous context

Gibson & Birkinshaw (2004) who were the pioneers in studying the various facets of contextual ambidexterity investigated the effect of organization context in the same dimension of stretch, discipline, support and trust on contextual ambidexterity and business unit performance. From the data collected from 4,195 individuals in 41 business units from 11 industries, it was found that the relationship among organization context, contextual ambidexterity and business unit performance are significant and robust. It was found that the higher the level of contextual ambidexterity, the greater was the firm performance. Another finding was that, the higher the organization context, the greater was the contextual ambidexterity. Additionally, it was found that contextual ambidexterity fully mediated the relationship between organization context and business unit performance. With

the data analyzed using the ordinary least square (OLS) method, it was found that performance management context and social support context and their interaction were significantly and positively related to performance.

Napier et al (2011) in his study done in a small software development organization through a rigorous 2 year action research developed a framework which integrated the existing theory on contextual ambidexterity to improvise the co-ordination of the firm. The study intended to identify how organization context leads to contextual ambidexterity through the four phases of diagnosing, visioning, intervening and practicing. The study affirms the findings of Gibson and Birkinshaw (2004) antecedents that proper organization context is paramount for contextual ambidexterity in organization.

Lew, Sinkovics, & Kuivalainen (2013) found that organizational trust and behavioural monitoring of professionals contribute to the firm level exploratory capabilities and market performance. The study viewed trust and behavioural monitoring as relevant organization context factors which actually enhanced contextual ambidexterity and market performance. The sampling frame was 350 hardware and software firms in the mobile computing market.

In their extensive review of literature on total quality management and ambidexterity, Luzon and Pasola (2011) cited that promotion of management leadership, participation, employee commitment and team work have a positive impact on the ambidexterity of management at an individual level. In fact, the focus on human aspect has a positive impact on the ambidexterity of top management teams as well. They perceived organization context as a combination of hard values- discipline and stretch and soft values- trust and support and found that an organization context within a total quality framework can foster contextual ambidexterity. Their study established that total quality management influences organization context which enhances contextual ambidexterity.

The above studies established a positive relationship between organization context and contextual ambidexterity. But the study conducted by Bruijn (2011) in Rabo bank in Tilburg established a negative relationship between organization context and contextual ambidexterity. The study mapped the perception of 352 respondents which included 27 managerial and 325 non managerial employees and found that there was no relationship between organization context and the ability to explore and exploit the competences of the organization and that simultaneous perusal of contextual ambidexterity is almost nil.

Ajayi & Morton (2012) proposed a framework that promotes effective innovation through shop floor employees' contribution to organizational ambidexterity, organizational innovation capability and firms marketing innovation capability in Nigerian small and medium scale enterprises. The main objectives were to identify the organizational context for contextual ambidexterity of the shop floor employees, to identify how organizational ambidexterity relates to organizational and marketing innovations capabilities and to determine how contextual ambidexterity and organizational and marketing innovations capabilities can contribute to effective innovation in small and medium scale enterprises in Nigeria. They established through an in depth review of literature that organization context, organization culture and organization structure positively affect contextual ambidexterity.

Comez (2013) investigated the role of ambidexterity and transformational leadership on innovative firm performance. They measured the perception of middle and top level managers working at manufacturing organizations in Marmara region of Turkey. Innovation is measured over the previous three years. It was found that ambidexterity positively affects innovative firm performance. During the period when the market turbulence is perceived to be high and low, ambidexterity positively affects innovation. Market turbulence, according to Comez (2013), has no control over the relationship between ambidexterity and innovation.

The representative association among competence, innovation and new product development was extensively studied by Leonard Barton (1992), Tushman and Anderson (1986), Van de van (1986), as cited by Brion, Mothe, & Sabatier (2007). Brion et al (2007) studied the relationship between organization context, contextual ambidexterity and innovation. They attempted to find the effect of performance management which is the 'short term organization context' and risk taking and creativity which is the 'long term organization context', on innovation ambidexterity expressed in terms of exploitative innovation and explorative innovation. Contextual ambidexterity is found to play a mediating role. It is found that positive effect of performance management on innovation is stronger when competence exploitation is high.

Doganova, Colombo, Piva, D'Adda, & Mustar (2009) examined the impact of ambidextrous alliances on product innovation. Ambidextrous alliances are inter-firm collaborations which involve exploitation and exploration. The study was conducted among 149 firms engaged in alliances with huge tech companies. It was found that despite the tension to balance the exploitation – exploration thread, the organizations pursuing ambidexterity were as efficient as the alliances specialised in either exploration or exploitation. They are particularly relevant for new product development and innovation.



J. Jansen, Simsek, & Cao (2012) established that unit level ambidexterity positively affects performance, build and tested a cross level model suggesting that structural and resource attributes of the multi unit context significantly conditions the relationship between unit ambidexterity and performance. Unit ambidexterity is more likely to contribute to performance where it is less centralised. Another finding is that the structural differentiation of exploitation and exploration does not condition the relationship. It was also found that those units that benefit from ambidexterity are of high degree of discretion, autonomy and resource flexibility. Structural differentiation, centralization and resource munificence are found positively moderating the relationship between ambidexterity and performance. The study was conducted among unit level managers, senior level managers and employees.

Miller, Bierly, & Daly (2007) speculate that radical innovation is the result of exploration and incremental innovation is the result of exploitation. They emphasised that distinctive capabilities are necessary to develop and implement radical and incremental innovation and that exploration enhances radical innovation and exploitation speed up incremental innovation.

Chandrasekharan, Arvind (2009) analysed structural, contextual and cognitive ambidexterity in high tech industry and found that all the three forms of ambidexterity particularly contextual ambidexterity affects the firm's ability to innovate and improve.

Simsek (2009) found that contextual ambidexterity enhances the organizational performance and top management team support is important for fostering contextual ambidexterity in organisations.

J.J.P. Jansen (2005) speculated that firm level contextual ambidexterity enhanced firm level organizational performance and that exploitative and explorative innovation moderated the relationship between the two variables. It was found that organization should strive for balancing the exploitation and exploration. It was also found that ambidexterity enhanced performance in terms of profit and innovation when exploitation and exploration are done in two different units than when they are combined in organization units.

Guttel & Konlechner (2009) observed contextual ambidexterity as the ambidexterity that arises from the creation of a context that allows employees to pursue exploratory and exploitative activities. They found contextual ambidexterity as enabled by broad skill base of employees and organization culture provides stability for concurrent performance of exploitation and exploration. They asserted two cultural characteristics as the function of contextually ambidextrous organisation. One is performance orientation and group norms. The second is integrative frame of reference. The advantage of contextually ambidextrous organization is that they permit fast knowledge transmission between exploitative and exploratory learning domains which is necessary for rapid development of innovative and application software.

Selcer & Decker (2012) found that ambidextrous design models are instrumental in enhancing organisation's innovation and productivity. They studied Houston oil and gas company that has adopted an ambidextrous model and found that ambidextrous structures can enhance innovation but not at the time of turbulence. They also stressed that in an ambidextrous model the optimal balance of tight –loose design creates excellence in a company by providing 'agency' to the individual and 'control' to the management. The study also emphasised the necessity of having an adaptable innovative culture in an organization that functions beyond its structures.

He and Wong (2004) in the context of technological innovation strategies found that exploitative and explorative innovation strategies are positively related to sales growth. They conducted the study on a sample of 206 manufacturing firms.

As cited by Raisch & Birkinshaw (2008), Venkatraman et al (2007) conducted an empirical survey on 1005 software firms to test the impact of ambidexterity on firm performance. In contrast with the pervious researches, he could not find any empirical support for the relationship between contextual ambidexterity and performance. But it was found that temporal cycling between exploitation and exploration has positive effect on firm performance. By the term temporal cycling, it means focussing on either exploitation or exploration one at a time sequentially. There was no evidence in support of the effect of contextual ambidexterity on performance. But it is found that focussing on the two activities- exploitation and exploration, one at a time, has positive influence on firm performance.

Lubatkin et al (2006) conducted an empirical study on 139 small and medium sized enterprises and found that the joint pursuit of exploitation and exploration is positively related to firm performance.

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