

School of Management

Organizational Ambidexterity: Balancing Exploitation and Exploration in Organizations

**Blekinge Institute of Technology
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Master in Innovation, Entrepreneurship and Business Development**

Author: Mert Yigit (mertyigitindustry@gmail.com)

Supervisor: Assistant Professor Urban Ljungquist

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Abstract

Purpose: This paper aims to investigate necessity of ambidexterity for organizations. The main interest of this thesis is to investigate *why organizations should be ambidextrous and how organizations can reach ambidexterity* under the pressure of limited resources and competitive market condition.

Findings: This thesis explored relations and tensions between exploitation and exploration in organizational and individual aspects. Findings in the research show that communication skill of the subunits in the case company need to be strengthened. Subunits need to be independent from each other. However, they should be aware of other subunits' actions. In this sense, there is need for strong information flow between all units in the case company. Participation of employees and teamwork should be promoted by leaders. This thesis suggests that establishing special subunits for explorative activities would not only leverage explorative processes in the organizations but it would also leverage exploitative activities. This issue causes time management and scheduling problem for the employees and also individuals are distracted by focusing on conflicting dimensions such as explorative and exploitative tasks. Behavioral integrity is one of the most important subjects. Behavioral integrity is the key factor to provide consistency between subunits. Independent subunits with common vision lead firms to ambidexterity.

Implications: The implications of this study contribute to achievement of organizational ambidexterity in companies. This thesis was started with introduction to importance of ambidexterity, organizational ambidexterity, exploration and exploitation in case of long and short term organizational performance in sight of knowledge based and managerial perspective.

It also explored relations and tensions between these dimensions such as exploration and exploitation in terms of organizational and individual aspects, contextual and structural ambidexterity, social support and performance management, dynamic and ambidextrous capabilities with implication of case study research.

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1. INTRODUCTION

Ambidextrous literally means a person who is capable of using both hands simultaneously with equal skill. In management literature, it is used to state an organization's capability to perform conflicting activities simultaneously (Gibson and Birkinshaw, 2004; Lubatkin et al., 2006; Yu, 2010). Organizational ambidexterity has been one of the most important issues of its time and it is a crucial topic not only for scholars, but also for the industrial field in terms of organizational and knowledge management areas (Gibson et al., 2004).

Ambidexterity refers to the capability of managing complex and conflicting components such as exploration and exploitation, flexibility and efficiency, radical and continuous innovations, alignment and adaptation. These interfering activities need to be simultaneously managed in the organization; this is the main subject of organizational ambidexterity (Adler, Goldoftas, and Levine, 1999; Gibson and Birkinshaw, 2004; Tushman and O'Reilly, 1996).

These issues have become more important and critical for organizations due to recent aggressive competitive conditions as well as inconsistent, conflicting stress between organizations' subdivisions under rapidly changing environments in the last decade (Nonaka, Toyama, and Byosiére, 2001).

Due to rapidly changing environment and dynamic industrial conditions, companies need to consider their long-term targets rather than short-term success in order to assure their future sustainability. Thus, ambidexterity aims to discover the ways that organizations can be in charge of not only the alignment of recent activities in organization such as profitability and productivity issues, but also the management of the adaptability issues for the changing business environment (Jansen, Bosch, and Volberda, 2005a).

The most important elements of organizational ambidexterity are exploitation and exploration. Exploitation refers to productivity, efficiency, selection, implementation, choice, refinement, and execution; while exploration refers to variation, experimentation, flexibility, innovation, play and discovery (March, 1991). In accordance with the definitions of these two terms, exploration and exploitation may require conflicting and different kinds of resources, organizational structures as well as plans and processes within the same organization; although they are both learning

activities (Gupta et al., 2006; March, 1991). Consequently, organizations must be able to run these conflicting activities simultaneously in order to be successful in the long-term.

Broadly, many scholars (Duncan, 1976; March, 1991; Tushman and O'Reilly, 1996; Adler, Goldoftas, and Levine, 1999; Gibson and Birkinshaw, 2004; Jansen, Bosch, and Volberda, 2005a) claim that exploration and exploitation are conflicting activities that require different resources which counteract each other. The reason for this conflict is limited resources in organizations and therefore requires the need for a balance and agreement between exploitation and exploration. Providing equilibrium between these conflicting exploration and exploitation is extremely vital for companies' survival in the long-term (Lewin et al, 1999; March, 1991) and identifying a trade-off (Liu, 2006). Due to limited resources, organizations are struggling with the collision between exploitation and exploration as these two elements work against each other (Jansen et al., 2006; Tushman and O'Reilly, 1996). Hence, firms have to decide on the tendency of activities between exploitation and exploration since they inhibit each other.

Currently, the perception of the trade-off between exploitation and exploration has been changing in the literature. Scholars claim that resources do not have to be limited, which is what causes the conflict between these two elements. Accordingly, some scholars' point of view has shifted from a trade-off perception to being a paradoxical perception (Duncan, 1976; Gibson et al., 2004). Likewise, some scholars are more interested in finding mutual interaction between exploration and exploitation. This point of view eventually leads to necessity of a closer approach to the problem of resource scarcity, which puts organizations under pressure to enhance their productivity and flexibility simultaneously.

1.1. Background

Since the last decade, organizations started to pay more attention to the importance of adaptability due to the technological downturn, political turmoil and the economic crises of recent times. Adaptability is a crucial characteristic which provides all successful organizations with agility, therefore enabling them to move quickly towards new opportunities, to be able adjust to volatile markets and to avoid complacency. On the other hand, adaptability alone is not enough to achieve absolute success. Organizations and companies are required to be innovative and proactive. What's more? They should excel at exploiting the value of their proprietary assets by in rolling out existing business models quickly and in by taking the costs out of operations. In

order to succeed over the long term period, a company needs to master both *exploration* and *exploitation* which are attributes that can be referred to collectively as to as *ambidexterity* (Birkinshaw and Gibson, 2004).

Exploration can be defined as searching or being able to discover something, as well as being willing to take a risk or experiment and to discover different variations and innovative ways of doing things. Exploitation, on the other hand, can be defined by such things as the refinement and selection of something in regards to its production and efficiency, and the ultimate implementation and execution of that choice (March, 1989). Firms are seeking ways to adapt themselves to environmental changes. At the same time they are exploring new ideas, processes, and even markets, while they are also developing new products and services for emerging markets and customers. Meanwhile, firms also need be stable to leverage current competencies and exploit existing products and services (Danneels, 2002).

Baum, Li, and Usher (2000) suggested that “exploitation refers to learning gained via local search, experiential refinement, and the selection and reuse of existing routines. Exploration refers to learning gained through processes of concerted variation, planned experimentation, and play.” According to Benner and Tushman (2002), “Exploitative innovations involve improvements in existing components and build on the existing technological trajectory, whereas exploratory innovation involves a shift to a different technological trajectory.”

Along the same lines, He and Wong (2004) defined exploitative innovation as “technological innovation activities aimed at improving existing product-market domains” and exploratory innovation as “technological innovation aimed at entering new product- market domains.” In this sense, providing a balance between exploitation and exploration or alignment and adaptability or efficiency and flexibility is one of the core competencies of the firms. “Both exploration and exploitation are essential for organizations, but they compete for scarce resources. As a result, organizations must make explicit and implicit choices between the two” (March, 1989).

1.2. Problem discussion

The main underlying problem in becoming an ambidextrous organization is finding the straight balance between exploitation and exploration. On the other hand, exploration and exploitation refer to creating and experimentation for new knowledge in a changing environment and using

existing knowledge and improving internal aspects of an organization to make profit respectively. Organizations that can exploit current environment and explore future opportunities are able to achieve a higher performance (Levinthal and March, 1993; Tushman and O'Reilly, 1996; Michl and Picot, 2013). In short term, focusing too much on exploitation makes firms looking good but it also prevents firms from being aware and capable toward the changes in the market and industry in the long term. In addition, too much concentration on exploration undermines current resources and damages the firms' gross profit (Birikinshaw and Gibson, 2004).

Moreover, in the literature there is no distinctive consensus about how organizations should pursue ambidexterity and under which conditions that ambidexterity should be implemented. In this case, organizations and firms need to be aware of their organizational structures, they need to be able to sense changes and opportunities in the market and therefore identify the action they need to take and reconfigure their system for sustainable adaptability.

1.3. Problem formulation and purpose

The main interest of this thesis is to investigate *why organizations should be ambidextrous*. Also, this thesis asks *how organizations can reach ambidexterity* despite the many conflicts and debates about achieving an ambidextrous structure under the pressure of limited resources and market conditions which are always changing rapidly.

Regarding classification of ambidexterity and its attributions for specific circumstances, determining what factors may lead organizations to achieve ambidexterity, relation between innovations, dynamic capabilities and ambidexterity are the main concerns. Moreover, in the literature methods of developing ambidexterity seem to be limited.

Finally, this thesis refers to contextual and structural ambidexterity by emphasizing the importance of social support and managerial capabilities for organizations to enhance their ambidextrous skills for survival in a rapidly changing environment with highly competitive circumstances. In this thesis, analyzing the structure of the case company aims to understand how competitive the company is at achieving ambidexterity, and what the obstacles and gaps are for the company to be ambidextrous.

1.4. Thesis structure

Regarding the structure of this thesis, Chapter 1 consists of the introduction of the research problem, the problem formulation, the purpose of this thesis and research question. Chapter 2

starts with the theory concerning literature on ambidexterity, organizational ambidexterity, exploration and exploitation, relations between ambidexterity and innovation, dynamic capabilities, tensions and tradeoffs between exploration, and the relationship between exploration and exploitation.

Then it continues with information regarding innovation and organizational ambidexterity, dynamic capabilities and ambidexterity, ambidexterity and organizations capabilities, structure of organization, structural ambidexterity and contextual ambidexterity, contextual ambidexterity, evaluation of performance management context, and evaluation of social support context.

In chapter 3, the type of research is emphasized which involved a case study company. In chapter 4, empirical findings based on the research questions are shown in the case study. In chapter 5, empirical findings are interpreted by theoretical framework. In chapter 6, the conclusion with implications for the case company is presented and finally in chapter 7, the bibliography and appendices appear.

2. THEORY

In this chapter, there is a literature review which emphasizes relevant research by many scholars on organizational ambidexterity, exploration and exploitation, ambidextrous and dynamic capabilities of firms and their interaction with each other, to lead the organizations to achieve a level of ambidextrous ability.

General managers and corporate executives must constantly go backward and forward by attending to the products and processes of the current internal environment while managing adaptations for the innovations that define the future industry simultaneously (O'Reilly and Tushman, 2004). While firms are protecting their conventional businesses, they also need to adapt to the changing business environment. Many scholars (Duncan, 1976; March, 1991; Tushman and O'Reilly, 1996; Adler, Goldoftas and Levine, 1999; Gibson and Birkinshaw, 2004; Jansen, Bosch, and Volberda, 2005a; O'Reilly and Tushman, 2011) claim that firms should be able to switch the activities between exploitation and exploration. And others claim that they should establish cross-functional teams.

O'Reilly and Tushman (2004) found that successful ambidextrous companies share some common characteristics. For example, they divide their units. New and exploratory units are separated from companies' traditional and exploitative units to make an independent difference between processes, structures and cultures. At the same time, they claim that those separated units have tight bonds with the top senior executive level.

Prior literatures claim that successful firms are ambidextrous and many researchers have multiple definitions of organizational ambidexterity. As a general abstract, organizational ambidexterity is the ability of organizations and how well they deal with two conflicting elements such as efficiency and flexibility (Adler, Goldoftas, and Levine, 1999), evolutionary and revolutionary change (Tushman et al., 1996), low cost strategy with differentiation (Porter, 1996), incremental and radical innovation, and the alignment of existing resources while becoming adapted to a changing environment simultaneously (Birkinshaw and Gibson, 2004).

In addition, Jansen, Van den Bosch and Volberda (2005) describe ambidexterity as "the ability to pursue exploratory and exploitative innovation simultaneously." In the research of Tushman and O'Reilly (1996), ambidexterity is defined as "the ability to simultaneously pursue both

incremental and discontinuous innovation and change.” As stressed before, March (1991) stated the importance of balancing explorative and exploitative activities. Ambidexterity is considered as one of the dynamic capabilities of organizations due to the need of using both converse approaches such as exploitation and exploration in the organizations (Eisenhardt and Martin, 2000; Ancona, Goodman, Lawrence, and Tushman, 2001).

Organizations arrange the structure of their systems by the innovation process steps. There are two kinds of structures in this sense: organic structures and mechanistic structures. Organic structure has adaptable context for exploration and mechanistic structure has convenient context for exploitation. In this sense, ambidexterity is considered as being able to manage the changeovers between these different dimensions for organizational adaptation to a changing environment (Eisenhardt and Brown, 1998; Lovas and Ghoshal, 2000; Venkatraman et al., 2006). Furthermore, Tushman and O’Reilly (1997) pointed out adaptation speeds to changing environment and how needs for new products and services may force the organizations and firms to deal with exploitative and explorative activities simultaneously by independent subunits, strategies, models and different adjustments within the same organization for each conflicting dimensions. In this respect, in order to be ambidextrous, there is not only a need for separated subunits, but also, there is need for different systems, strategies, processes, cultures, and techniques within organizations internally.

In this case there are separate elements used for mutual purposes in terms of organizational strategy. They use and keep those elements together for common goal to improve elements within an organization. These adjustments and strategies which are not consistent within organization can be managed and governed by a management team and it makes the whole system consistent in the big picture (O’Reilly and Tushman, 2004; Smith and Tushman, 2005).

Furthermore, there is big difference between the ambidexterity which exploration and exploitation are performed in sequence and the ambidexterity which exploration and exploitation are performed simultaneously (Gupta et al., 2006). In the past, organizations used to deal with internal adjustment and switching from one adjustment to another, but today the challenge is shifted to managing exploration and exploitation activities simultaneously. The only way for successful implementation in managing these activities simultaneously is via appointment of a

management team taking essential strategies for achieving the ambidextrous form (Rotemberg and Saloner, 2000).

Regarding the need of subunits, its consistency and collaboration with each other, behavioral integrity at the top of the organization provides a better understanding and vision for the subunits within the same organization for conclusive and clear common purpose. Furthermore, behavioral integrity in the organizations provides consistency while inconsistent actions are taken by different subunits and it brings ambidexterity to the firm (Lubatkin et al., 2006).

Since managing two different dimensional activities simultaneously causes ambiguity and disagreements, in order to solve this problem, mutual strategy and common understanding should be delivered from the top management through subunits. In another study, Jansen (2006) emphasized that a common vision of an organization within subunits is highly correlated with the ambidexterity of that organization. Moreover, there is another issue as the probability of the senior teams not having agreement on strategies for managing conflicting elements. This issue puts the ambidextrous condition of the organization in danger (Smith and Tushman, 2005).

The importance of organizational structure in achieving the ambidexterity is emphasized by demonstrating how organizational structure is positively correlated with daily meetings and senior level oversight which links the subunits to each other (O'Reilly and Tushman, 2004). Furthermore, they touch upon the strategic monthly meetings with managers of explorative activities to evaluate the progress and coordination of explorative activities. In this regard, scholars have consensus about how these strategic linkage provides consistency and enables exploratory activities to improve exploitative activities within the organization by clear vision and mutual targets of senior teams.

In this thesis, organizational ambidexterity is considered as the fact that underlies organizations' key decisions. Organizations which aim to reach organizational ambidexterity are supposed to have two fundamental approaches (Duncan, 1976; March, 1991; Tushman and O'Reilly, 1996; Adler, Goldoftas, and Levine, 1999; Gibson and Birkinshaw, 2004; Jansen, Bosch, and Volberda, 2005a; O'Reilly and Tushman, 2011). One of them is exploration and exploitation which have an orthogonal relationship rather than two ends of a continuum. According to organizational

learning theory, the difference between exploration and exploitation (March, 1991) has always been considered as trade-offs in the literature. On the other hand, most researchers (Huber, 1991; Shapiro and Varian, 1998; Gupta et al., 2006; Raisch et al., 2008) claim that regarding the interaction between exploration and exploitation, they are not always limited by resource scarcity. There are different kinds of resources such as information, knowledge, technical skills which can be used for exploration and exploitation simultaneously and mutually.

Despite that, all those different strategies can be performed under the separate units or subdivisions. In this respect, if organizations try to execute exploitative and explorative activities in the same subdivision, those exploitative and explorative activities might be mutually exclusive. Thus, there is a need for subdivisions within organizations to perform explorative and exploitative activities simultaneously which will then enhance the organizations' ambidextrous skills (Gupta et al., 2006).

Therefore, these approaches indicate that in cases of organizations which have more resources, achieving the ambidexterity is easier. Moreover, if there are enough subsystems that are specialized in a specific theme, managing conflicted activities becomes simpler. Nevertheless, interaction between exploration and exploitation is not the only way to get benefits from ambidexterity.

The past studies show that scholars have discussed organizational structural and contextual ambidexterity. As it is stated in the research of Duncan (1976) the formal structure in an organization is one of the most crucial items for the organizations to make themselves reach ambidexterity by managing separate subunits performing different project and tasks which involves conflicting operations such as exploitative and explorative activities at the same time. One of the most fundamental points of structural ambidexterity is knowledge based activities in organizations based on organizational design theories (Ettlie et al., 1984).

Damanpour (1991) listed four main factors which influence innovation in organizations as centralization, formalization, horizontal and vertical differentiation. In addition, Blackburn and Cummings (1982) listed these factors as centralization, formalization, complexity and

configuration. Decentralization and formalization are considered as the most important factors in terms of the organizational ambidexterity. With regard to organizational ambidexterity design, the structure of ambidextrous organizations consists of subdivisions which are highly separate and independent from each other and which are not integrated. Exploitation related parts of the subunits are supposed to be huge and centralized which depends on the organization's primitive and conventional processes and cultures, while exploratory parts of the subunits within organization are decentralized, small and independent from the organization's regular processes and cultures (Benner and Tushman, 2003; O'Reilly and Tushman, 2011). Generally speaking, the purpose of exploratory units consists of experimentation, which is performed frequently while exploitation units aim to increase efficiency and profitability, as well as decrease the variance.

In order to achieve organizational ambidexterity, conflicted activities need to be balanced. Regarding balancing exploitation and exploration, Gibson and Birkinshaw (2004) claim that converse tasks need to be performed separately. Additionally, organizational ambidexterity is considered as characteristics of organizational behavior. In their research, they pointed out some of the facts of contextual ambidexterity and they claim that behavioral capacity affects all units in the organization, which enhances alignment and adaptability skills simultaneously.

Herewith, in order to achieve ambidexterity, organizations should be capable of managing their activities and tasks while they encourage the employees to make their own decisions. This thesis' view includes factors, support, connection, discipline and mutual trust. This thesis takes a look into factors of organizational ambidexterity which affects organizations efforts to be ambidextrous, for instance, efficiency and flexibility (Adler et al., 1999) evolutionary and revolutionary change (Tushman, O'Reilly, 2004) and alignment and adaptation (Gibson and Birkinshaw, 2004).

This thesis defines organizational ambidexterity as firms' capability to allocate fundamental resources for being successful at both explorative and exploitative activities. According to the researcher's observation, labor power and time are the most fundamental and basic resources which ought to be allocated. Moreover, the most important factor is the communication skills for increasing utilization of these resources.

2.1. Exploration and exploitation

When a company starts to launch its products and reaches the customers, it must allocate a specific part of its resources such as customer support, for the maintenance of these products through updates and fixes. Thus, shifting between launching and maintenance for the products puts the company in a dilemma. The company needs to satisfy existing customers while using competitive pressure to force itself to be innovative (Schreuders, Legesse and Maxwell, 2012). This dilemma can be considered as a contradiction between exploration and exploitation as well.

According to ambidexterity perspective, exploration and exploitation are dependent of each other. In order to ensure firm's current viability, exploitation must be carried out and simultaneously exploration as well to provide future viability (Levinthal and March, 1993; March, 1991; Hsu, et al., 2013). Maintaining a proper balance between exploration and exploitation is the main issue of organizational ambidexterity. First, the definition issue is touched upon in the literature, and then relationship and interaction between exploration and exploitation. In the literature there are many discussions and arguments about these definitions. In general, some scholars (Benner and Tushman, 2002; He and Wong, 2004; O'Reilly and Tushman, 2011) seem to believe that learning activities are only in exploration. On the other hand, some other researchers (Yell, 1979; Nerkar, 2001) consider exploration and exploitation as learning activities which are continuous, while in contrast it is reusing knowledge from past experience of the organization.

In another description, on one hand, exploitation is described as the things related to efficiency, production, refinement, choice, selection, implementation and execution while on the other hand, exploration is described as things which are related to innovation, flexibility, discovery, experimentation, search, variation, risk taking, play and choice (March, 1991). March is one of the scholars who believe both exploration and exploitation are learning activities. He stated that the fundamental matter in exploration is concerned with experimentation to find out new alternatives, while the matter of exploitation refers to the refinement and extension of existing competencies.

Baum stated in his research that, exploitation is connected to learning which is obtained by experimental refinement, local search, and selection of existing processes; while exploration

relates to learning which is acquired by the processes of decided variation and experimentation with play. In their research Benner and Tushman (2002) stated that exploration includes the distance search for new opportunities while exploitation is executed by local research within regular processes and technologies of organizations.

As stated before, exploration and exploitation are learning activities, despite having totally different paths from each other. The difference between exploration and exploitation is described as exploitation consisting of innovation activities which focus on the improvement of existing product market extent, while exploration deals with new product market domains (He and Wong, 2004). On the other hand, exploitation is only considered as the reuse of existing resources and past knowledge of the organization. In this case, exploration is only one factor which is part of the learning activities that carry the organization through the innovation. In addition, some scholars (Rosenkopft and Nerkar, 2001; Yell, 1979) consider that all kind of activities are exploration as long as it increases the experience of the units within organization, even if it is the reuse of past knowledge. As both exploration and exploitation are considered as learning activities, and also these two conflicting elements actually are dependent upon utilization, searching and organizational knowledge in terms of organizational learning theory. In this respect, exploitation helps organizations to create incremental innovation while exploration includes radical innovation. These different kinds of innovations require different kinds of activities in organizations. Simultaneous pursuit of both incremental and radical innovations helps organizations to be successful at both exploring new opportunities and exploiting existing business (Michl and Picot, 2013).

As stated before, exploration and exploitation are learning activities; despite, having totally different paths from each other. One difference between exploration and exploitation is that exploitation consists of innovation activities which focus on improvement of existing product market extent while exploration deals with new product market domains (He and Wong, 2004). Exploitation is only considered as reuse of existing resources and past knowledge of the organization. In this case, exploration as a learning activity leads the organization through innovation. In addition, some scholars (Rosenkopft and Nerkar, 2001; Yell, 1979) consider that all kind of activities is exploration as long as it increases the experience of the units within

organization even it is reuse of past knowledge. As both exploration and exploitation are considered as learning activities; scholars (Cohen and Levinthal, 1990; Teece, 2007) also state that, these two conflicting elements actually are depending on utilization, searching and organizational knowledge in terms of organizational learning theory. In this respect, exploitation helps organizations to create incremental innovation while exploration includes radical innovation. These different kinds of innovations require different kinds of activities in organizations.

As earlier stated, finding the balance between exploration and exploitation is a crucial milestone for organizations' achievement. Another significant issue for organizations is focusing on exploration by ignoring the exploitation in an adaptive system of changing environment. This may cause financial problems for the adaptive organization and it may not be able to execute its experimental activities which exploration entails. In this regard, exploration and exploitation can be considered as interactive and logrolling activities for each other. Systems involved in only exploitation without exploration are similar to trying to find out an optimum state within their own system internally. Due to this reason, in the literature about the organizational ambidexterity achieving and providing balance between exploration and exploitation are the most crucial issues. Focusing on exploration too much may cause high expenses of experimentation without any financial output. Moreover, firms focusing too much on exploration it may lead organization to competence trap. It means that short term success but long term failure (O'Reilly and Tushman, 2008; Eriksson, 2013).

2.1.1. The relationship between exploration and exploitation

Firstly, most scholars (Duncan, 1976; March, 1991; Tushman and O'Reilly, 1996; Adler, Goldoftas, and Levine, 1999; Gibson and Birkinshaw, 2004; Jansen, Bosch, and Volberda, 2005a; O'Reilly and Tushman, 2011) have always treated exploitation and exploration as two confronting elements. These two main components of organizational ambidexterity have been treated this way because of scarcity of resources within organizations. Balancing exploitative and explorative innovation activities with ambidexterity has been one of the foremost questions in management research (Chang and Hughes, 2012). Exploration refers to experiential discovery of discontinuous opportunities by researching what organizations do not have any knowledge about

and the technologies organizations do not have. Exploitation refers to continuous, step by step and incremental utilization of what firms already have (Bot and Renaud, 2012).

As mentioned before, in this thesis exploration involves radical innovations while exploitation leads the organization to incremental innovations, and it brings different types of outcomes. In other words, these two different components require different resources, inputs and different approaches. Moreover, balancing issue between exploration and exploitation can be executed simultaneously in separated subunits although there is lack of resource in the cases if they are orthogonal. Exploitation and exploration are considered as different dimensional elements, local search and distance search respectively. If the conflicting activities are not dependent on restricted specific resources, new product introduction for new markets may be provided by interaction of these different dimensions. (March, 1991). Exploitation is also described as competency for reuse of existing knowledge within organizations while exploration is about the power of finding out new knowledge.

	Exploration	Exploitation
Outcomes	New designs, new markets, and new distribution channels	Existing designs, current markets, and existing distribution channels
Knowledge base	Require new knowledge and departure from existing knowledge	Build and broaden existing knowledge and skills
Result from	Search, variation, flexibility, experimentation, and risk-taking	Refinement, production, efficiency, and execution
Performance implications	Distant in time	Short-term benefit

Table 1 - Comparison of exploration and exploitation

The capabilities of ambidextrous organizations are pointed out as follows: avoiding major or sudden organizational changes, achieving the higher performance and sustainability, organizational inertia, obtaining the higher sales growth, improving their learning capacity, making profit through both revolutionary and evolutionary changes, change and preservation or exploratory and exploitative innovations (O'Reilly and Tushman, 2011). It proposes a hypothesis

which claims that the interaction of decentralization, formalization and connectedness have positive impact on organizational ambidexterity. “Therefore, interactions of these factors that act complementarily and reinforce each other are necessary to achieve ambidexterity” (An, S.A. and An, A.A.A., 2009). In their research, they examined organizational ambidexterity and organizational factors that are antecedents of ambidexterity in a theoretical way, and they researched the impacts of these factors on organizational ambidexterity empirically. As a result of their survey and regression analysis, contradictory organizational characteristics, decentralization, formalization and connectedness are significantly and positively related to exploitation, exploration and their interaction.

Regarding organizational learning aspects of ambidexterity, the improvements of exploitation and explorations leverage the innovation capability of the organization. There is still the risk of facing the danger of inadequate competence while organizations are dealing with exploitative activities. Moreover, there is a risk of facing the failure while focusing on explorative activities in organization. For this reason, it is hard to decide on trade-off between these two dimensions. Many scholars claim that achieving ambidexterity is an advantage and that it brings better results to organizations than not being ambidextrous. In contrast, the necessity of pursuing ambidexterity is an unascertained point in the literature. In this thesis, it is assumed that sometimes managing these both activities may not be the most important issue for organizations. Firm’s circumstances need to be analyzed properly. For instance, it could be argued that if profit is gained in short period and if it is guaranteed while external environment with competitors is challenging and tough, organizations mostly focus on their exploitative activities to survive. Organizations use existing technologies and create new ones to adapt themselves to the changing environment. In the following sections of this thesis, the types of innovations are discussed in the light of organizational ambidexterity.

2.2. Innovation and Organizational Ambidexterity

Regarding exploitation and exploration, innovation does not only refer to exploration in terms of ambidexterity. In this respect, innovation effort has been split into three categories: incremental innovations, architectural innovations and discontinuous innovations. Incremental innovation refers to small improvements in companies’ existing products, activities and processes which help out them to operate more efficiently. Architectural innovations refer to changing some

elements in the business such as technological, process based components and elements. Finally, discontinuous innovation means radical advances which change the whole market or industry. And all these three types of innovation have different targets.

Innovation is separated into two different groups as technological innovation and administrative innovation. According to Damanpour (1996) technological innovation consists of process, knowledge and technology focused activities while administrative refers to structural, strategic and managerial aspects of the organization. This thesis addresses technological innovation in order to emphasize the importance of ambidexterity for the firms. Moreover, technological innovation is classified into two categories as component and architectural knowledge (Henderson and Clark, 1990). In this manner, difference between these varied technological innovations provides better understanding of the effects of innovation for many kinds of organizational knowledge.

Another particular matter in respect of innovation is incremental and radical innovation. These different kinds of technological innovations have been classified by Schumpeter (1942). The matter of this classification is based on how significant their effect is on the market and how reformative they are. Refinement and improvements on the existing knowledge, process and products within organization refer to incremental innovation. Radical innovation is independent from culture and routine of organization in knowledge base. Furthermore, technological innovation is divided into two subcategories as well these are architectural and modular innovations (Henderson and Clark, 1990). Architectural innovations use existing knowledge, cultures and components to provide new relationships between those components while modular innovations focus on change of main concept of the organization. Besides these, architectural innovation is considered as incremental innovation and modular innovation as radical innovation (Henderson and Clark, 1990). Radical innovation is lying under the secret of creating organizationally distinct units which are strongly integrated at the senior executive level. They also asserted that there is no accurate scale to distinguish radical innovation or incremental innovation; this notion might be varying and might depend on size and purpose of the organization. In other words, a radical innovation for small organization might be considered as incremental innovation by a huge organization. Implementation of radical innovations requires more time and sources than others (Lin, et al., 2013). Incremental innovations are implemented

on existing products, knowledge and markets (Tushman and O'Reilly, 1996, Lin, et al., 2013). Moreover, organizations which are able to combine both radical and incremental innovations may have significant advantage (Lin, et al., 2013).

2.3. Dynamic capabilities and ambidexterity

Dynamic capabilities are described as “the firm’s ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments.” (Teece et al., 1997).

Scholars seek the ways of dynamic capabilities helping organizations to adapt themselves in changing business environments, and changes in markets. Therefore, missing parts in those researches are how these capabilities support exploration and exploitation (March, 1991; O'Reilly and Tushman, 2011). They also wrote on the routines and capabilities which are effective for short run competition in mature and existing markets as well as technological developments and improvements for long term success in rapidly changing environment to new markets and technologies. Firms require not only operational activities and skills to perform projects and processes by existing knowledge, but also they need to be able to reuse and configure the assets that they have and be able to change their structure to become adapted to rapidly changing environment characterized by new products, markets and technologies. From this point of view, dynamic capabilities compose specific abilities which help the management teams to specify the strengths, opportunities, threats and weaknesses and reuse their components. These abilities include competence on processes, strategies, organizational structures, cultures and disciplines. Thus, in order to be successful in the global market, firms should be able to adapt themselves to rapidly changing market while coordinating internal aspects (Teece et al., 1997).

Dynamic capabilities are considered as one of the most fundamental components for organizations to achieve ambidexterity in order to perform activities which are not only based on existing knowledge and processes, but also on new and emerging markets. Senior leaders in management team are among the high priority requirements to balance and coordinate conflicting activities and adjustments (Tushman and O'Reilly, 2011). As earlier stated, exploitation refers to focusing on short term success strategy with efficiency, incremental and continuous innovation while exploration requires long-term strategy with flexibility and adaptability. Although,

exploration and exploitation are incompatible dimensions, organizations need both and that means they are supposed to achieve short term success by using existing knowledge with product-service based perspective, while performing the requirements for adaptability to emerging markets in long-term. However there is a risk of competency and failure trap. It means if organization cannot balance those two different dimensions, exploitation may drag the organization to competency trap and similarly exploration may cause failure trap for organization (Leonard-Barton, 1992; March, 2003; Siggelkow and Rivkin, 2006).

The base of dynamic capabilities is firms' capabilities to be ambidextrous (O'Reilly and Tushman, 2011). In order to reach ambidexterity, there is need for senior managers to perform two fundamental tasks. Senior managers must sense the changes in competitive environment in terms of technology, competition, customers and regulations. Secondly, they must be able to manage and seize these opportunities and threats. Ambidexterity includes decentralization, differentiation, targeted integration, leadership to organize the simultaneous pursuit of exploration and exploitation activities. The primary duty of executive leadership is improving these dynamic capabilities.

Regarding the need of ambidexterity in terms of sensing, seizing and reconfiguring, these are the components of dynamic capabilities. The skills, abilities, strategies and structural mechanisms of the organization need to be connected with exploration and exploitation and management team should establish essential environment which provides flexibility and better understanding in terms of behavioral sense in the organization. There is also risk technology called disruptive technology which may cause chaos and disturbance. It is claimed that this kind of technologies impair the organization's existing structure in terms of competitive advantage in the market (Christensen, 1997). Another issue is that of organizations which are not able to perform explorative and exploitative activities simultaneously and implement different strategies or cannot exceed the moderate level for both exploration and exploitation. In this sense, some scholars (Porter, 1980; Ghemawat and Costa, 1993; Ebben and Johnson, 2005) claim that focusing on only one strategy is preferable than pursuing the both.

2.4. Ambidexterity and organizational capabilities

One of the most important factors for pursuing ambidexterity is managing both different dimensions simultaneously. According to March (1991), organizational developments and survival crucially depend on implementing of balance between exploration and exploitation. So to say, ambidextrous organization is seen as a juggler. They can run in the two paths not only dealing with efficiency, cost, profit, incremental innovation and also new emerging markets, new products, flexibility, experimentation and all other concepts which constitute exploration (Tushman and O'Reilly, 2011). In the literature, they also emphasize that the question of firms can take those both dimension simultaneously with higher performance than focusing on only one dimension at one time.

Combinative and absorptive capabilities can be counted as some of the most important factors for the organizations to be ambidextrous. Barney (1991) and Wenerfelt (1995) referred in their research that competitive advantage provides improvements of organizations competence and capabilities and also reconfiguration of resources and knowledge of the organization (Rosenkopf and Nerkar, 2001). Combinative capabilities are described as capability to synthesize and apply existing knowledge. By combination of existing resources and knowledge, organization gets new forms from existing knowledge which can be launched in the market.

Systems capabilities are substantial factors for organizations' integration of existing knowledge. It is important because it helps the organization to combine their knowledge and resource properly and efficiently by eliminating the unnecessary processes and risk of coordinating shortcomings. On the other hand, the organized tasks and processes in the organization may improve the firms' efficiency but there is a risk of reducing the variation and flexibility in the organization. For this reason, system capabilities cannot be used solely to improve ambidexterity of the organization. In this sense, coordination is another important factor which completes drawback of system capabilities to help the firms to be ambidextrous by providing solution for conflicting purposes, coordination issues for the individuals in organization. As mentioned before, common goal at the top of the organization is the important factor for organizations to be ambidextrous and in order to achieve common goal in the organization, subunits and individuals need to be interacted with each other. At this juncture, coordination capability matters and provides the sequence and quality of the interaction and knowledge sharing. In terms of

exploration, as discussed in previous chapters, exploration refers to new production, knowledge sharing and at this point coordination capability of the organization increase the possibility of new ideas and knowledge by interaction between individuals within the organization.

Socialization capabilities and systems capabilities are opposite to each other. Considering systems capabilities the important issue is the functionality of the subunits within the organization and these all depends on strict structure. On the other hand, socialization capabilities refer to integration and association of the organization. In this thesis, social support and performance management are addressed to organizational ambidexterity with implication of the Case Company. Interaction and informal interaction between individual in organizations provide information flow within subunits in the organization. In this sense, socialization capabilities help organizations to achieve ambidexterity.

Moreover, under the circumstances which organizations face with high competitive environment they cannot only use their formal, existing knowledge and technologies. In order to go to significant distance they need to create new knowledge which may change the markets balance or may become blockbuster. Due to this reason, organizations need to be sophisticated by dynamic capabilities to sense opportunities for getting relevant resources. Absorptive capabilities are defined as ability to sense and seize new (Cohen and Levinthal, 1990). This kind of capabilities improves the organizations explorative skills under the arduous competitive conditions. Organizations' ambidexterity in terms of production development is positively correlated with absorptive capabilities, interaction of the subunits, systems and integration, and socialization capabilities.

In the study of March (1991) main challenge is about balancing the use of an existing technology and invention of a new technology. It claims that, exploration of new technologies, markets and alternatives undermines the speed and performance of existing skills which are improved. And also improvements and efficiency activities in existing procedures reduce experimentation. Balancing exploration and exploitation in an appropriate way is very difficult at all levels such as at the individual level, the organizational level and also the social system level. The research also claims that finding a balance between exploration and exploitation lies under balancing the processes of variation and selection (Hannan and Freeman 1987). For organizations' survival,

selection of forms, routines and practices are very crucial matter; and also in order to adapt to changing environment, generation of new alternative practices are crucial drivers as well. One of the important conflicts of balancing exploration and exploitation comes up when short-run and long-run concerns and also gaining individual knowledge and collective knowledge. In this sense, the strategies and procedures which are beneficial for the firms in the long-run are not always beneficial in the short term. Similarly, activities and elements that are good in the short-run may not be good in the long term. What is good for a part of an organization may not always be good for another part and another system.

Outputs of exploitation are quicker and clearer than the exploration due to speed, proximity and clarity of feedback. Searching for new ideas, markets, products have less certain outcomes take longer time than the further development of existing ones. Gupta, Smith and Shalley (2006) define some particular issues on ambidexterity in their research. The first issue is definitions and connotations and the second issue is orthogonality versus continuity.

The third issue is ambidexterity versus punctuated equilibrium according to some studies adaptation lies under balancing exploitation and exploration to achieve success and some of them claim that the solution lies under punctuated equilibrium. “Ambidexterity refers to the synchronous pursuit of both exploration and exploitation via loosely coupled and differentiated subunits or individuals, each of which specializes in either exploration or exploitation. In contrast, punctuated equilibrium refers to temporary rather than organizational differentiation and suggests that cycling through periods of exploration and exploitation is a more viable approach than a simultaneous pursuit of the two” (Gupta et al., 2006). It shows that these two approaches are precisely different mechanisms.

Authors add if exploration and exploitation are considered in single domain such as subunits or individuals then these dimensions can be taken in to account as two ends of a common continuum and in this sense exploration and exploitation activities needs adaptation mechanism to balance exploration and exploitation. Moreover, if it is considered in multiple and weak connected units, exploration and exploitation are conceptualized as orthogonal. It is also claimed that ambidexterity is easier to be implemented to organizational or system level than individual or subsystem level. For example, in independent subsystems in the same organization one subunit may pursue exploitation while other subunit pursues exploitation. Also Benner and Tushman

(2003) claim that for tightly connected subsystems, punctuated equilibrium is better option rather than ambidexterity on the other hand for weakly connected subunits or individual ambidexterity is preferable. Moreover, research claims that there is competition between exploration and exploitation for scarce organizational resources. Because of this reason, more resources are assigned to exploitation and less resource is assigned to exploration activities generally. And also, exploitation reaches to success earlier and there is lower risk to fail when it is compared with exploration. Likewise, it claims that these activities are self-reinforcing and because of that exploitation often leads to more exploitation and similarly, exploration leads to more exploration. Gupta, Smith and Shalley (2006) emphasized individual or subunits within organizations are generally pursue the exploration and exploitation apart from each other, *mutually exclusive*. For subunits or individuals with poor interaction, explorative and exploitative activities may overlap and may exist in different domains. Another issue on ambidexterity is “duality versus specialization”. Many important articles claim that specialization rather than duality might be entirely viable.

2.5. Structure of organization

O'Reilly and Tushman (2004) also categorize firms' structure of organization in terms based on breakthrough in projects. They claim that companies structure their projects based on these four basic ways. These basic structures are classified in four categories as *functional designs*, *cross-functional teams*, *unsupported teams* and *ambidextrous organizations*.

Functional designs (see diagram.1) are entirely dependent and integrated to regular organizational and management hierarchy. *Cross-functional teams* (see figure.2) are integrated to established organization but it is independent of management hierarchy.

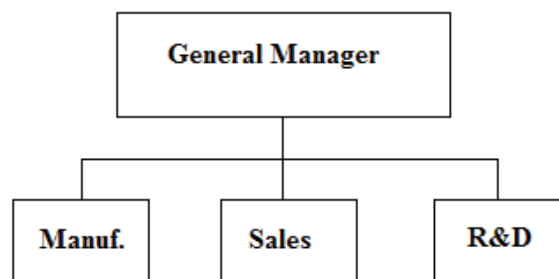


Diagram 1 - Functional designs

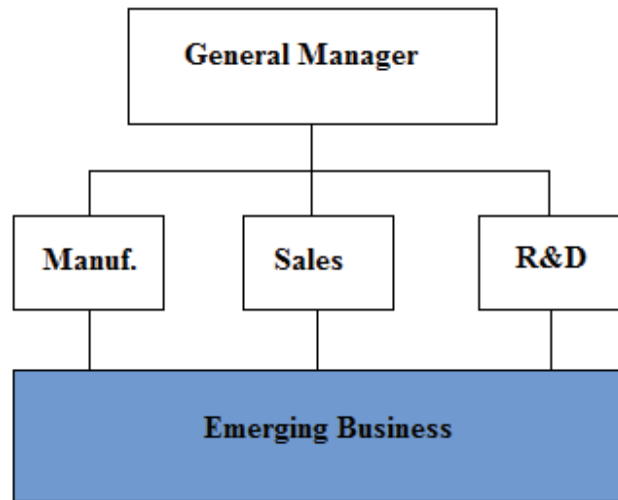


Diagram 2 - Cross-functional teams

Unsupported teams (see diagram 3) are entirely independent of established organization and management hierarchy. In *ambidextrous organizations* (see diagram 4) projects and efforts are organized as structurally independent, each unit has own strategy, culture and structure but also integrated in to the existing senior management hierarchy. Prior researches exhibit that “when it came to launching breakthrough products or services, ambidextrous organizations were significantly more successful than the other three structures.” (O’Reilly and Tushman, 2004).

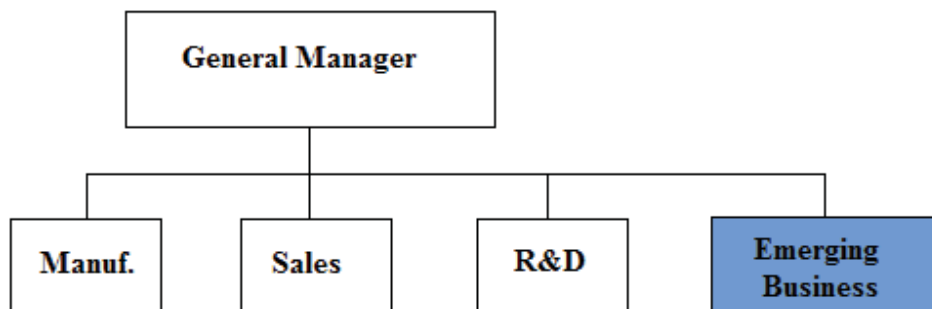


Diagram 3 - Unsupported teams

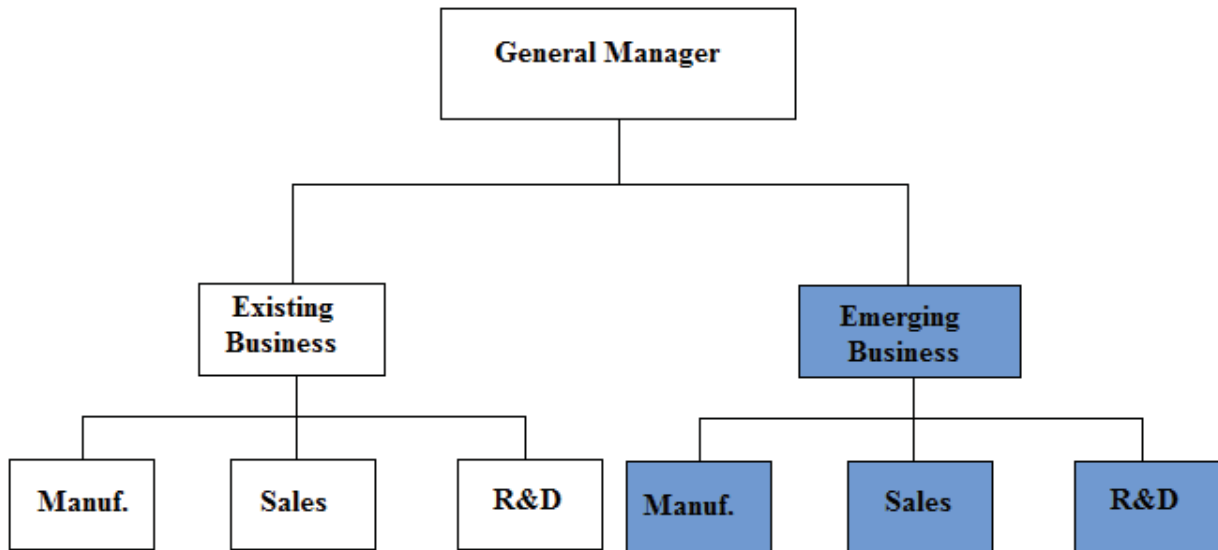


Diagram 4 - Ambidextrous organization

One major advantage of ambidextrous structure is pointed out as it is capable to have important resources from the traditional units such as cash, talent, expertise, customers. Moreover processes, projects and structures are not overwhelmed by regular managerial procedures. In this sense, different alignments, common vision and senior team integration supply ambidextrous leadership (see table 2).


Alignment of:	Exploitative Business	Exploratory Business
Strategic intent	Cost, profit	Innovation, growth
Critical tasks	Operations, efficiency, incremental innovation	Adaptability, new products, breakthrough innovation
Competencies	Operational	Entrepreneurial
Structure	Formal, mechanistic	Adaptive, loose
Controls, rewards	Margins, productivity	Milestones, growth
Culture	Efficiency, low risk, quality, customers	Risk taking, speed, flexibility, experimentation
Leadership role	Authoritative, top down	Visionary, involved
 <p>Ambidextrous Leadership</p>		

Table 2 – The research tool - alignments for ambidextrous leadership (O'Reilly and Tushman, 2004)

2.6. Structural ambidexterity and contextual ambidexterity

Standard approach to reach ambidexterity is creating structural ambidexterity (Birkinshaw and Gibson, 2004) which creates separated structures for different kind of activities. In this sense, creating structural separation is important as they have very different activities and they are dramatically different from each other. However, separation causes isolation between department and lack of linkages. Thus, Birkinshaw and Gibson (2004) developed a new concept of ambidexterity which is called *contextual ambidexterity*. In contextual ambidexterity concept individual employees can arrange their tasks and make choices between alignment and adaptation oriented activities in their daily works. In *table 3*, the main differences between structural ambidexterity and contextual are shown.

	Structural Ambidexterity	Contextual Ambidexterity
How is ambidexterity achieved?	Alignment-focused and adaptability-focused activities are done in separate units or teams	Individual employees divide their time between alignment-focused and adaptability-focused activities
Where are decisions made about the split between alignment and adaptability?	At the top of the organization	On the front line – by salespeople, plant supervisors, office workers
Role of top management	To define the structure, to make trade-offs between alignment and adaptability	To develop the organizational context in which individuals act
Nature of roles	Relatively clearly defined	Relatively flexible
Skills of employees	More specialists	More generalists

Table 3 – The research tool - structural ambidexterity versus contextual ambidexterity

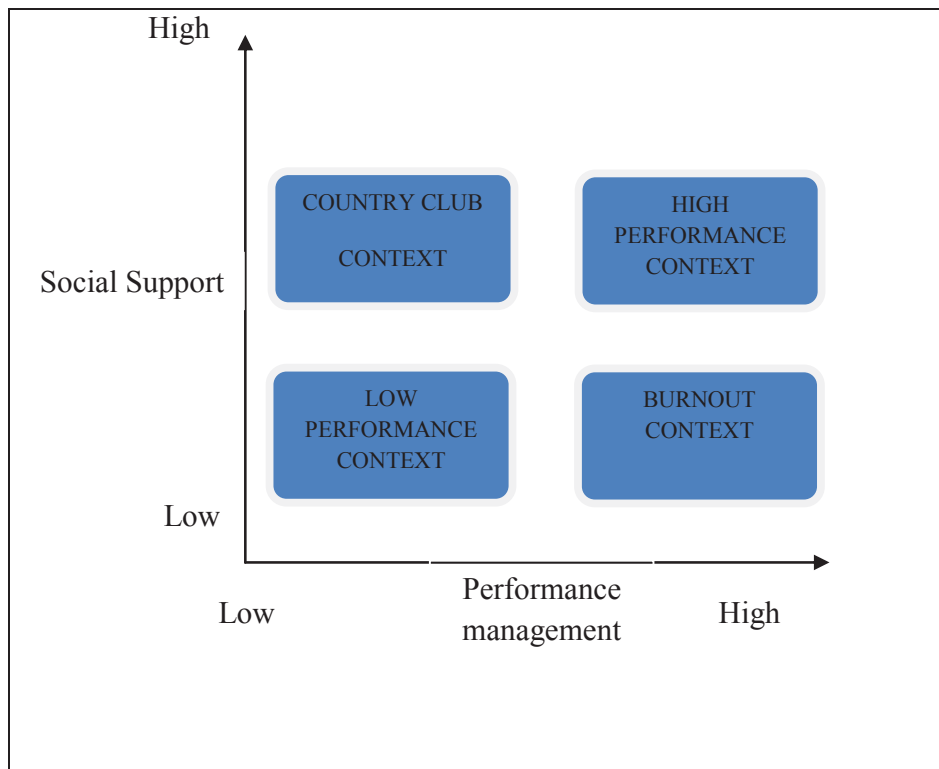
Structural ambidexterity is regarded as the ability to develop subunits within the same organization. In contextual ambidexterity, exploration and exploitation are carried out in the same unit (Benner and Tushman, 2002; Lubatkin et al.,2006; Michl and Picot, 2013).

2.7. Contextual ambidexterity

There are four sets of attributes are pointed out as stretch, discipline, support and trust and by combining of these attributes they create two context; performance management which is the combination of stretch and discipline and social support which is combination of support and trust. If these two contexts can exist strongly in an organization then the organization can reach the high-performance organizational context which lead to ambidextrous organization. On the other hand, if there is an imbalance between these concepts than it causes organizational contexts being less than optimal.

There are four types of organizational context which are influenced by social support and performance management. The first one is burnout context which comes up when performance is high and social support is at the low level. This context makes ambidexterity difficult to be achieved. Country-club context occurs when social support is provided in work environment for employees and when employees are barely productive. This can be considered as another obstacle to achieve ambidexterity. Lack of both social support and performance management

causes low performance context and existence of both provides high performance context (see *graph-1*).



Graph 1 - Social support and Performance management

In order to diagnose the organizational context of a company as it can be seen on *graph-1* Birkinshaw and Gibson (2004) developed a list of inquiry. As it can be seen on *graph-1* there are two dimensions of the graph. There are two lists of inquiry for each dimensions, social support and performance management (see *appendix 1* and *appendix 2*).

This paper aims to explore how organizations can allocate their resource to satisfy the requirements of exploitative and explorative activities properly. In the research of O'Reilly and Tushman (2004) developed a framework which indicates elements of exploitative and explorative activities. The elements are categorized such as strategic intent, critical tasks, competencies, structure, control-rewards, cultural and leadership role. And they are classified under two categories such as exploitative business and exploratory business. When these elements are used

properly, they can lead organizations to ambidextrous leadership (*see Table 2*). In this manner, this thesis used this framework as research tool. This research tool helps researcher to explore firms' competency and incompetency by observing absence and utilization of the elements.

Birkinshaw and Gibson (2004) developed a new concept of ambidexterity. They claim contextual ambidexterity is more advantageous than structural ambidexterity for firms to reach ambidexterity. In this sense, they developed a framework. It shows difference of how structural ambidexterity and contextual ambidexterity are distinguished as the answers of several questions. It investigates how ambidexterity is achieved, where decisions are made for allocation between exploration and exploitation, role of top management, nature of roles and skills of employees in structural ambidexterity and contextual ambidexterity. This is the second research tool of the thesis. It helps to investigate firms' tendency between structural ambidexterity and contextual ambidexterity (*see Table 3*).

3. METHOD

3.1. Research design

The research methodology is an important foundation for any research effort. Saunders et al. (2009) explains that the research philosophy has a significant impact on the assumptions held by the researcher and the way in which he views the world. These assumptions will in turn influence the research strategy by influencing the choice of methods that will be employed in this thesis. Saunders et al. (2009) also opines that it is important to understand the research methodology not particularly because they are ‘right’ or ‘wrong’ choices in terms of the methods that can be chosen, but for the researcher to be theoretically informed so that he or she is able to defend the choices made in terms of the methods used.

This chapter firstly discusses the two main research approaches, namely quantitative and qualitative. Then it describes the considerations which led to the case study research methods being chosen. Finally, the limitations of the research are discussed.

The research effort will consist of primary and secondary research. Secondary research will be employed to allow the author to gain a deeper understanding of the subject and to inform the primary research. The literature review presented in the previous chapter, identified relevant issues in the area, such as the problems posed in integrating, motivating and communicating with a more heterogeneous workforce. The literature review has relied on publications in peer reviewed journal articles and textbooks for empirical discussion of the theories in managing diversity. It will rely on commercial publications such as magazines and newspaper articles to identify practical issues and trends in the area.

Primary research will be conducted in order to help the research effort achieve the research objectives. The primary research will involve qualitative interviews. Qualitative interviews are indeed very popular methods of primary data collection. Though optimally researcher administered, interviews can be administered by post, in person, over the Internet, etc. Interviews are best suited for the collection of data that is richer in nature, and from a smaller sample size. Therefore, given the in-depth nature of the present study, combined with its small sample size the

choice of interviews as the primary methodology for data collection was an appropriate one. The current research aims to collect information about the manner through which an organization becomes ambidextrous.

Brace (2008) highlights the fact that interviews are more successful in obtaining responses, simply because the presence of the researcher motivates the respondents. The researcher opines that the interview is better suited for the current research because it will provide the researcher with an instant opportunity to obtain clarifications about the information provided if necessary. This is particularly important because the information that is to be collected is highly qualitative in nature. Examples of information to be collected include information about the nature, content, duration and motivation of ambidextrous organization under study. Since Case study approach is adopted, the research requires a small sample size.

Buchanan and Bryman (2009) explain that interviews are a very flexible method of obtaining information, because they help the researcher to attain multiple objectives. These may help to understand the respondents' subjective experiences, contextualizing the experiences, recognizing the interrelationships between different experiences, etc. In the current research, it can be said that there are multiple objectives to be achieved. The researcher has to understand the nature and composition of the organization; he also has to understand the context in which the organization reaches the high-performance organization and relationship between two or more attributes. Hence it is the interview method which will be able to provide the researcher with the opportunity to achieve all these objectives. For these reasons in this thesis, it is decided to use the interview method for primary data collection.

Three different types of interviews can be identified on the basis of degree of structure of the interview and the degree of control the respondent has over the direction of the interview. The three types of interviews are the structured, semi-structured and unstructured interviews. The structured interview is where the researcher approaches the respondents with a set number of questions. The respondent typically has no control whatsoever over the questions that are put to him or her. In unstructured interviews on the other hand, the respondent has a much greater degree of control over the direction of the interview, and the information that is produced.

Buchanan and Bryman (2009) explain that structured interviews produce more standardized data, which are shorter and more focused. Standardized data is also easier to analyze. For the current research, it is important that the researcher is able to compare and contrast the information that is generated; this could for example be the differences in the diversity policies of the different companies. Hence, the structured interview is more desirable, as it produces standardized data. Furthermore, it is necessary that the researcher obtained focused and detailed information about each of the areas for which it has been identified that information is required.

The primary research involved interviewing managers belonging to the organization under study. This allowed the thesis to identify current practices in reaching the high performance and identify possible and existing problems.

In order to ensure that the research is manageable, it was necessary to restrict the scope of the research. As such, the case study method was identified. The corporation was chosen for practical reasons, mainly for ease of access for the researcher. They were approached for consent to take part in the research. The members of corporation that declined to take part in the research were replaced with another that was willing, since eight persons were to be interviewed. It was important to ensure that the respondents for the interviews were representative of the organization.

3.2. Qualitative research – Case study method

Two main research paradigms can be identified, namely quantitative and qualitative. These two paradigms take different views with regard to the research philosophy. The research philosophy helps the researcher to determine the nature of the evidence, and how different pieces of evidence have to be treated, and why. The qualitative paradigm is associated with the interpretivist approach, where the researcher holds the view that the research conclusions are derived from interpretations of the evidence. The quantitative paradigm on the other hand is associated with positivist approach, which is particularly suited for scientific research. Here, the evidence is regarded as proof of the hypothesis. In addition to this, there is a mixed methods approach to research which combines both quantitative and qualitative research methods. Bryman (in Buchanan and Bryman, 2009) explains that in the mixed methods approach, the research process is in an ambiguous position, being both old as it has been used in different forms for many years

and now because there is significant recent interest in the 'new' paradigm. Mixed methods research integrates both the qualitative and quantitative research philosophies. However, this research is emphatically not of this mixed kind, for as explained here, it primarily consists of qualitative interviews.

This thesis aimed to investigate how and why organizations become ambidextrous, thus exploratory research was applied with unstructured approach which provides qualitative research making the research more flexible and focused to find out environmental condition in organizations. Qualitative data analysis needs to be started with identifying the main themes; the researcher needs to go through descriptive responses to each question to understand the system, then according to these responses researcher needs to develop broader themes. In this sense, case study method has been used to analyze and proved better understanding to the research questions beyond theory.

In order to start research, first step is formulating and clarifying the method of research (Ghauri & Grønhaug, 2010). Regarding the inquiry mode, there are two approaches, structured approach and unstructured approach. Structured approach is considered as quantitative research, objectives, design, sample and questions are predetermined. Unstructured approach is classified as qualitative research and it is more flexible in the research process and better to find out the nature of a problem such as a description of an observed situation or working conditions in a particular industry.

This thesis used the Case Study method to investigate how and why organizations become ambidextrous. The exploratory research was applied with unstructured approach, which provided qualitative research, making the research more flexible and focused to find out the environmental condition in organizations. Smith et al. (2009) stressed that it is also important to pay attention to the epistemology of the research subject, i.e. the manner in which new knowledge can be created within the field, the scope of the subject area, and the nature of the subject. The researcher opines that the current research is highly qualitative in nature, where reality cannot be accurately described; knowledge in the current field can be said to be constructed from the interpretations of the evidence. Hence, the researcher believes that the interpretivist stance is the most suitable for the current research.

3.3. Data collection

Consideration will be given in the design of the interview in order to ensure that the maximum amount of information can be gathered whilst at the same time balancing the possibility that respondents may be put off by too many questions and they may have problems understanding the questions, etc. In this thesis the interview tool was used to collect first hand primary data. The main purpose of the interview with the case company was to obtain understanding about the dynamics and factors which affects firms' ambidexterity. Analysis of companies' innovative strategy, understanding of ambidexterity, organizational structure and hierarchy among individual and subunits – all helped overcome drawbacks and determine where exactly they were in terms of ambidexterity (Yin, 2009). Interviews are the basis for the data collection. Semi structured, face to face interviews were performed with managers, engineers and designers in R&D. The author collected information about the company's history, structure, product range and scale, innovative approaches, the company's existing products and processes, hierarchy and awareness of common vision among subunits, explorative activities such as processes of launching new products to the market. In total, 8 interviews were conducted with the manager, designers and engineers. Each interview took nearly 2 hours. In two workshop settings, the research group also discussed the preliminary results with the interviewees for verification.

The interviews helped the researcher to understand the views of the respondents in detail; it provided rich information which helped the researcher identify the consequences of the factors that affect the high performance in the company. It was expected that the interviews will allow the researcher to collect information that will help shed light on the research question as well as clarify any questions that arise during the data collection phase. The sequential nature of the interviews also provided the researcher with the opportunity to get familiarized with the responses, and understand the different perspectives of the respondents being interviewed in detail.

3.3.1. Structure of the interview

As the research showed that the structured interview was the desired method of data collection, it was necessary to develop the questions for the interview. The researcher initially developed a set of questions and with help and feedback from the supervisor, refined these questions. Considerations about the content of the interview are discussed below. The questions used in the

current research are presented in *appendix 5*. The researcher had to ensure that he was able to guide the flow of the interview along desired topics, whilst at the same time allowing for rich and unanticipated information to be collected. It was important to ensure that the data collected was relevant; control over the feedback received will ensure that the data collected will be relevant. The researcher found that during the conduct of the interview, the interaction between the respondents resulted in more detail to the different perspectives being articulated, resulting in richer and more valuable data being gathered.

3.3.2. Content of the interview

McNabb (2004) opined that interviews should generally last for approximately two hours. The interview should start with the researcher introducing himself, followed by questions. In practice the researcher also informed the respondents about the progress of the research to date and how they could obtain the results of the research. The researcher also informed the participants that the main research questions would be divided into four sections of four questions each, related to the company's history, structure, products range and scale, innovation approaches, the company's existing products and processes, hierarchy and awareness of common vision among subunits, explorative activities such as process of launching new products to the market. McNabb also opined that the interview should begin with a few icebreaker questions that are interesting and non-threatening. The researcher asked general questions such as if the respondent was comfortable, whether they needed a drink, etc. Then a few transition questions were introduced, in accordance to guidance by McNabb. These questions solicited demographic information from the respondents. The researcher put forward the interview questions related to the research. At the end of the interview, the researcher thanked the participants.

The researcher opined that recording the interview may inhibit the respondents, as they may be reluctant to air a negative opinion for fear of losing their jobs if any negative repercussions arise at a later date. Hence the researcher only jotted down notes during the interview. Although recording the interview and transcribing it would have guaranteed that no important detail in the responses were missing out.

3.4. Sampling

Sampling is the process of selecting a certain set of people or events from the large population size. Different sampling techniques can be used like probability sampling and non-probability

sampling (Saunders et al., 2009). In this study author used non-probability samples to investigate the research issue.

3.4.1. Qualitative sampling

To collect qualitative information, the author used non-probability sampling techniques. A specific sample of eight employees -managers, engineers and designers -in the R&D department of the company were taken for the purpose.

The interview schedule was set with them in advance. The average time of interview was 120 minutes. Though some initial questions were designed which was consisting of 15 questions, the author was free to ask any relevant question according to the situation. Regarding certain questions some of the respondents were not sure about, they referred to some other person. One respondent was unable to attend the interview right on time due to his health problem.

To save the time and cost of travelling, the author took interviews as much as possible in a single sitting. However, due to tight schedule, they could manage time slots of their own choice. There was a huge difference in point of view of some respondents even though they were working in the same organization. Their responses reflect their experience and department they serve for in the organization.

3.5. Limitations of the research

There are a number of limitations of this research which must be kept in mind. Firstly, the qualitative nature of the research means that it was not possible to provide empirical evidence that is numerical or statistical in nature. Secondly, because the data collected was qualitative in nature, there is room for different interpretations to be derived from the same data. The current research will employ the interpretation of the researcher.

In addition to this, the fact that the researcher has only onetime access to the participants of the research means that it may be difficult to post follow up questions to the respondents at a later point in the research, should any questions arise after the researcher has collated the material.

Finally, the sample population in the current research is not representative of the study population. This is only due to practical considerations. The researcher will have to interview whichever suitable respondents who were willing to participate in the research. Furthermore, the researcher did not have information on the composition of all human resource personnel and strategy in the organization. As such, this research will be highly exploratory in nature and as such it may be difficult to generalize any assumptions made.

3.6. Validity and reliability

According to Yin (2009) empirical social research can be testified with the help of four quality tests. The four tests are; constructing validity, internal validity, external validity and reliability.

3.6.1. Constructing validity

In researching the concepts, the operational measures have to be defined in clear precise terms to eliminate ambiguity in the study. In collecting evidence, multiple sources need to be studied. This helps in gathering the claims and establishing the thesis in a systematic manner. Theory for the current research is collected and presented through literature which includes books and journals, and web articles were also reviewed. The primary research is focused on empirical research which involves interviews with employees working in the company.

3.6.2. Internal validity

This is a tool which helps to establish the casual relationship of one fact to another. In this research, there are descriptive elements due to variety of contextual and structural factors.

3.6.3. External validity

This quality test is to help establishing the generalized nature of the study. Although, the case study is focused on one organization which makes generalization difficult, however, the size and system of the company makes the finding universal and useful to other organization. In terms of validating the study, one or more organizations need to be researched and compared.

3.6.4. Reliability

In this test, the findings of the research have to match if they are undertaken by some other person in a similar way. It means that literature review and interviews should lead the researcher to same conclusions and hence they can be predicted. It also establishes the fact that the research was faithful and it presents the opinions of the interviews in a truthful manner.

Key informants have been selected carefully. Also, the case study protocol was used for reliability. Cross checking and multiple respondents reduced the bias in the interviews. For clarification additional questions were asked.

4. CASE DESCRIPTION

4.1. Introduction

The case company is a medium sized technology based manufacturer in Sweden since 1972. Its products are represented in Europe, Japan and Australia. Recently, it's leading supplier in its market all over the Scandinavia since 2004. Being a producer who has wide range of products and service capacity, the company seemed very suitable to be studied in terms of ambidexterity.

They formed the company with the intention to supply quality machines to local distributors are not covered by the larger organizations. In fact, the principal reason for selecting the company for the case study is that it encompasses exploitation and exploration, the two elements of ambidexterity. Further the company had a built in competitive philosophy which instead of focusing on low pricing was focused on: operation safety, low operation cost and productive work environment. These objectives also make the company a fit case for the organizational sample for the study.

The case company is involved in production, manufacturing, design as well as marketing and sale. In this thesis, R&D unit of the company is investigated in the context of organizational ambidexterity with innovation, dynamic capabilities, contextual, structural, environmental, innovation and leadership aspects. As the company is a technology based producer, it manages operating incremental, architectural, continuous and radical innovation. In this thesis the organization's approach to ambidexterity is taken into consideration from the viewpoint of innovation, leadership with individual and organizational levels. The company constantly deals with large and big scale exploitative and explorative activities such as designing, refinement of production process, launching new products to the market. These activities constituted the main argument of ambidexterity. By this case company procedure we aimed to gain better understanding of organizations' point of view on ambidexterity. High technology based companies are confronted the need for exploring new products and process, also exploiting existing products and process as well (Chandrasekaran et al., 2012).

4.2. Organization's focus

The case company is focused on improvement and innovation in product development. The customer satisfaction through delivery “technically advanced product range.” The mission statement emphasizes on two pivots around which the organization operates; skilled employees and latest technology. The company website explains the manufacturing set up geared to achieve the objectives; “A complete production set up from raw material to final product test, equipped with automated machines and robots secure quality and accessibility”. The company is an environmentally friendly organization. It is aware that the production processes consume large amount of energy, water and chemicals. It has addressed these issues by using clean technology. The company has patented two new clean technology product ranges to address the environmental impact on account of use of the company's products. Using the technique of exploration, the case company has combined exploitation methods in this instance to save on costs and create a production of useful professional machines.

4.3. Characteristics of organization

1. The case company is a manufacturing unit focused on giving reliable and technologically innovative machines.
2. The case company's after sales and service team makes the organization complete and “secure operation”.
3. The preventive and corrective element is inbuilt in the organization.
4. The company believes in stakeholder support and involvement. It considers dealers as partners. The case company states: “We have a close dialogue, provide product support and training and ensure jointly that we meet the customer satisfaction.”
5. Innovation is major aspect, which has made the company survive the market competition.
6. The case company uses costing system in financial decision making.
7. The case company is aware about its corporate responsibility and hence has undertaken an environment impact assessment and undertaken remedial measures.

4.4. The scale of the organization

The case company's plant is situated at Vaxjö, Sweden on the 11,000 square of meters area and has a work force of 175 people. According the company records, the organization has five

departments namely, general administration, manufacturing, sales and marketing, after sales technical team and research and development. The majority of the workforce is employed in the manufacturing department. The research and development department has 7% of the employees. The managing director is the head of the plant assisted by five coordinators in the factory.

Methods used in the case study are both empirical and non empirical. First, the thesis will use the method of observation and analysis of interviewing the company personnel. Second, the secondary sources are used to understand the subject. The major effort will be made to understand the decision making process which makes the organization a high performer by combining a variety of factors.

Key implications of literature research will be applied to the case study are:

- i. Work related outcomes of exploration and exploitation
- ii. Knowledge base of the company that affect the ambidexterity
- iii. This persistence of the company in developing high performance results.
- iv. The interpretations and implication in short and long term.
- v. Structural and contextual Ambidexterity of the company.

4.5. Innovation

Concerning innovation, four types of innovations are considered in this thesis such as small improvements and activities on existing products those helps the company to operate processes efficiently. Secondly, the architectural innovations refer to changes on technological, process based components and elements. Also, discontinuous innovations which are radical advances changing the whole market or industry.

In the case company, architectural innovations are functional changes in machineries on the production line and redesigning. Architectural innovations are changes in the processes, the production lines in the case company. The case company starts to take a step into the process based innovation as long as the end customers and the distributors give feedbacks about final product. In addition to this, the case company changes the final products based on market needs. Among the changes the case company performed, there are patents certified in all over the

European and Western market. In R&D department, the manager says “*we can employ all type of innovation except of discontinuous innovation simultaneously*”. Also the R&D manager added the only incentive which fosters the case company to be innovative is feedbacks from customers. This claim has been verified by the answers of other respondents in the R&D department. R&D teams also state that having communication problem with other subunits in the company such as marketing department. Weak communication bonds between R&D department and the marketing department undermine the quality of inputs for the R&D department to be more innovative and to provide more consistent outputs to market needs. The distributors are considered as final customers for the case company. The distributors never play a part in innovation process. The only thing which the distributors take a part is the requirements and opinions about the final products.

In the interview with whole R&D department, the most crucial thing told with one voice was participants having no desire and vision in terms of innovativeness.

4.6. Ambidexterity

Regarding ambidexterity, the first element investigated was individual involvement. The individuals can work in different type of innovative activities such as continuous or architectural. Moreover, the individuals can manage their schedules to allocate their time in between different activities. On contrary, they are not allowed to take a decision about radical changes individually.

Discontinuous innovation projects are managed by under the managers’ charge. In the case company, top manager set up a new group consists of employees from existing subunits and one project takes approximately one year. Meanwhile, employees continue to work on their regular tasks and adjust their schedule between the daily tasks and special projects.

Concerning exploration and exploitation, the priority of the case company based on cost and profit although, is explorative and breakthrough activities such as new products, flexibility, adaptability. In the next chapter, these dimensions are elaborated and discussed with supportive suggestions.

5. ANALYSIS

Main purposes of the analysis chapter are to interpret the data collected in the case study research and provide comparison between the findings of the research and the theory by using the research tools (*see table 2 and table 3*) and the interviews. The data analysis was carried out to determine obstacles which hinder the case company to achieve ambidexterity. The types of innovation which are conducted in the case company, relationship between individuals and subunits within the case company in order to analyze decision making process in the subunits, its level of dependency and its effects on the case company's ambidexterity. The predisposition of the case company to exploration and exploitation was discussed by modifying the framework from the research of O'Reilly and Tushman (2004). Another subject which was conducted in the data analysis was predisposition of the case company between structural ambidexterity and contextual ambidexterity (Birkinshaw and Gibson, 2004). In the contextual ambidexterity, individuals have more liberty to make their own decisions for switching between explorative and exploitative activities. Moreover, contextual ambidexterity prevents the isolation between the subunits due to separation. In this regard, exploring the factors which affects the tendency of the case company to contextual ambidexterity is among the main objects of the data analysis. Main differences between these two concepts are: in structural ambidexterity, explorative and exploitative activities are performed in separate units while in contextual ambidexterity, employees divide their time between explorative and exploitative activities. In structural ambidexterity, decisions are made at the top of the organization. On the contrary, decisions are on the front line by plant supervisors and team leaders. Role of the top management is defining the structure to make trade-offs between exploration and exploitation in structural ambidexterity. On the other hand, in contextual ambidexterity it is developing the organizational context in which individuals act. In structural ambidexterity, skills of employees are more specialists while it is more generalists in contextual ambidexterity (Birkinshaw and Gibson, 2004). Subunits should be established to increase organizational ambidexterity in case there are strongly integrated management team and shared common vision within organization (O'Reilly and Tushman, 2004; Jansen et al., 2009; Eriksson 2013).

5.1. Innovation

Analysis process is started by taking into account of three different types of innovation which are taken in the company such as *incremental innovations*, *architectural innovations* and *discontinuous innovation* (O'Reilly and Tushman, 2004; O'Reilly and Tushman, 2011). They state that *incremental innovations* refers to small improvements conducted in firms' existing products and operations to lead them for operating more efficient. Small improvements are required in existing products and activities that help the company to operate more efficiently. Incremental innovation relates to small changes on existing products and exploitation on the potential of the established products and designs, increases the dominance of established firms (Henderson and Clark, 1990).

Tushman and O'Reilly (2011) describe ambidexterity as the ability to simultaneously pursue both incremental and discontinuous innovations and change that emphasizes the importance of incremental and discontinuous innovations to be ambidextrous successfully.

Architectural innovations refers to technological and process based improvements changing some components and elements in the organization (O'Reilly and Tushman, 2011), changing certain elements in the business such as technological, process based components and elements. Based on respondents, one problem is seen to be the adjustments in the production line, changing dimension of their product such as structure of the materials making their product more durable and stable. Regarding architectural innovation, functional changes in machineries in their production line and redesigning can be considered as architectural innovation.

Discontinuous innovations are radical advances changes the competitive position of the firm in whole industry or market (O'Reilly and Tushman, 2004; O'Reilly and Tushman, 2011). Discontinuous innovation is conducted by different set of engineering and strategies which opens up whole new markets and applications (Henderson and Clark, 1990). Regarding discontinuous innovations in the case company, it changes the final products by taking into consideration of market and industry needs. The R&D manager of the case company said: "As we have unique patents in Sweden and all over the Europe and in the western market, this can be considered as the radical advances conducted in our company".

Regarding the innovation of the case company, proportion of incremental, architectural and discontinuous innovation activities in the case company is analyzed. Based on participants' responses, approximately 50% of whole innovations in the case company are *incremental improvements*. Architectural innovations constitute 20% of whole innovation activities in the company. Discontinuous innovation is around 30%.

R&D manager of the case company mentioned most similar innovation actions can be employed simultaneously except of discontinuous innovation as it require basic studies for them. There are some major differences between incremental innovation and discontinuous innovation; they require very different organizational capabilities. Incremental innovation increases the capability of established organization while discontinuous focuses on asking new set of questions which lead firms practice on new technical and commercial skills and approaches (Handerson and Clark, 1990).

Moreover, as members of R&D department mentioned during process of incremental improvements, architectural innovation, individuals can make their own decisions about the adjustment and changes on their schedule. On the other hand, when a discontinuous innovation project needs to be started, top manager sets up a new group consists of individuals from different departments with different specialties. Generally, discontinuous innovations take one year and the individuals go on with their daily tasks while they are working on special project group and they are free to decide scheduling of the tasks which they are responsible to do.

Regarding time allocation for activities, employees in R&D unit work with all types of innovation. The incremental improvements are 15% of the whole innovation processes, architectural innovations are 35% and discontinuous innovations are 50% of the whole innovation activities.

According to answers from the respondents, the only factor that promotes the case company to take innovative actions is feedbacks from the distributors. Based on the distributors' requirements, the final products are changed or modified.

Feedbacks from the customers seem the only factor which foster and motivate the case company to be more innovative. In this thesis, in order to improve the case company's dynamic capabilities to sense opportunities other than the ones from the customers' feedbacks, it is suggested that the case company should take into account the environmental factors. Dynamic capabilities are described as "the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments." (Teece et al., 1997). Dynamic capabilities are considered as the most fundamental component for organizations to achieve ambidexterity in order to perform activities which are not only based on existing knowledge and process but also new and emerging markets. Senior leaders in management team are among the high priority requirements to balance and coordinate conflicting activities and adjustments (Tushman and O'Reilly, 2011). As it is mentioned, exploitation refers to focusing on short term success strategy with efficiency, incremental and continuous innovation while exploration requires long-term strategy with flexibility and adaptability. O'Reilly and Tushman (2011) argue that the ability of a firm to be ambidextrous is at the core of dynamic capabilities. Ambidexterity requires senior managers to accomplish two critical tasks. First, they must be able to accurately sense changes in their competitive environment, including potential shifts in technology, competition, customers, and regulation. Second, they must be able to act on these opportunities and threats; to be able to seize them by reconfiguring both tangible and intangible assets to meet new challenges.

During the case study research, one of the most noticeable issues was that all participants have no any other aspects of the innovation to add their business. This is the most crucial factor which undermines firm's survival in the long term. The main reason for not having any more aspect to add for innovation is their understanding of new product development phase only depends on distributors' feedbacks. Regarding distributors involvement, any of the distributors do not take part of innovation process. In contrast, the distributors only give their requirements and opinion about the new products and checking at final exhibition. Quite the contrary, in this thesis it is proposed to apply lean manufacturing philosophy in quality assurance steps in facilities. The core idea of it is to optimize a part of production process which does not work correctly and efficiently (Filippini, Güttel, Nosella, 2012). If there is a part which is defected at first stage of the production, it needs to be fixed at that phase, not at the final stage. This is in order to understand

which causes problem for that product and similar to that philosophy, involvement of distributors at all innovation steps can increase R&D unit's innovativeness, creativity and reduce their variance even it seems conflicting term to exploration.

5.2. Ambidexterity

Another indication in the case company is that, there is no special subunit which provides discontinuous innovation and research activities reinforce the case company to reach high ambidextrous level. Tushman and O'Reilly (2011) point out adaptation speeds to changing environment and needs for new products and services may force the organizations and firms to deal with exploitative and explorative activities simultaneously by independent subunits, strategies, models and different adjustments within the same organization for each conflicting dimensions. In this respect, in order to be ambidextrous there is not only a need for separated subunits, but also, there is need for different systems, strategies, processes, cultures, and techniques within an organization itself internally.

In the case company individuals have to take care of their daily tasks even while they are working on discontinuous innovations such new product design. In this sense, it seems to be a big obstacle for the organization to develop their innovation capability. As mentioned before organizations should provide social environment for subunits to get know each other needs under the whole organization but at the same time subunits need to be independent to focus on their tasks and challenges. Socialization capabilities refer to integration and association of the organization. In this thesis social support and performance management are addressed to organizational ambidexterity with implication of the case company. Interaction and informal interaction between individuals in organizations provide information flow within subunits in the organization. In this sense, socialization capabilities help organizations to achieve ambidexterity.

This thesis suggests that, the individuals working on small improvements and regular tasks try to manage radical innovation projects and big improvements as well. This situation may affect their judgments and kill their creativity in explorative activities. Individuals mostly divide their times by themselves for switching between exploitative or exploratory activities in daily basis.

Regarding the need of subunits and its consistency and collaboration with each other; behavioral integrity at the top of the organization provides a better understanding and vision for the subunits

within the same organization for conclusive and clear common purpose. Furthermore, behavioral integrity in the organizations provides consistency while inconsistent actions are taken by different subunits and it brings ambidexterity to the firm (Lubatkin et al., 2006).

Since, managing two different dimensional activities simultaneously causes ambiguity and disagreements; in order to solve this problem, mutual strategy and common understanding should be delivered from the top management through subunits. In another study by Jansen (2006) it is emphasized that a common vision of an organization within subunits is highly correlated with the ambidexterity of that organization. Moreover, there is another issue which is the possibility of senior teams not having an agreement on strategies for managing conflicting elements; that issue puts the ambidextrous condition of the organization in danger (Smith and Tushman, 2005).

The importance of organizational structure in achieving the ambidexterity is emphasized by demonstrating how organizational structure positively correlated is with daily meetings and senior level oversight which links the subunits to each other (O'Reilly and Tushman, 2004). Furthermore, they touch upon the strategic monthly meetings with managers of explorative activities to evaluate the progress and coordination of explorative activities. In this regard, scholars have a consensus that this strategic linkage provides consistency and it enables exploratory activities to improve exploitative activities within the organization by clear vision and mutual targets of senior teams.

Time management and scheduling is another big issue for the case company to develop their abilities to innovate. This is because the individuals in the subunits need to manage exploitative and explorative activities simultaneously by dividing their time and it causes problems for them to focus on one single activity. In this sense, one another suggestion of this thesis is that the case company should establish new independent unit to perform explorative activities as mentioned before (*see diagram 4 ambidextrous organization*). Previous models about ambidexterity claim that the structural separation of exploitative and explorative activities enables the organizations to pursue both exploration and exploitation simultaneously. Structural separation is necessary because individuals who work on operational activities are not able to explore and exploit simultaneously, as dealing with two contradictory and conflicting dimensions creates operational inconsistency and implementation (Kaupilla, 2010).

According to the research in the case company, most fundamental indication stresses the company's obstacles to reach ambidexterity is time scheduling and working on two different conflicted dimension, exploitation and exploration in daily basis and absence of special subunit to manage explorative activities.

O'Reilly and Tushman (2004) found that successful ambidextrous companies share some common characteristics, they divide their units. New and exploratory units are separated from companies' traditional and exploitative units to make an independent difference between processes, structures and cultures. On the other hand, they claim that those separated units have tight bonds with the top senior executive level.

Major advantage of ambidextrous structure is pointed out as it is capable to have important resources from the traditional units such as cash, talent, expertise, customers. Moreover processes, projects and structures are not overwhelmed by regular managerial procedures. In this sense, different alignments, common vision and senior team integration supply ambidextrous leadership (O'Reilly and Tushman, 2004).

The research tool (*see table 2*) was used to explore the case company's tendency between exploration and exploitation.

This thesis aims to explore how organizations can allocate their resource to satisfy the requirements of exploitative and explorative activities properly. For this reason, the research tool which consists of the elements which are categorized such as strategic intent, critical tasks, competencies, structure, control-rewards, cultural and leadership role. And they are classified under two categories such as exploitative business and exploratory business. This research tool explores the case company's competency and incompetency by observing absence and utilization of the elements. Finding the absence of the elements which belong to explorative or exploitative activities helps the researcher to find the case company's tendency between exploration and exploitation.

O'Reilly and Tushman (2004) indicate exploitative and exploratory businesses require very different strategies, structures, processes and cultures and each element has been asked are among exploitative or exploratory business in terms of intent, tasks, structures and cultures. In the

research tool helps the research to explore the company's tendency between exploitation and exploration by ranking selected priorities (*see appendix 4 for research tool with the results*).

In terms of explorative and exploitative activities, strategic intent of the case company is profit and cost based which are main elements of exploitative activities. Also regarding critical tasks in the company such as efficiency, operation, new products, incremental innovation, adaptability and breakthrough innovation efficiency is the most important element in the case company's existing culture. According to implication of the research, the most negligible element in terms of critical task is breakthrough innovation. Based on the findings, the case company should not only establish new independent subunits to innovate more and schedule their time easily but also the case company needs to change their company culture and point of view to be more innovative. Furthermore, for the case company margins and productivity are more important than growth and milestones, which other evidences show as their tendency to exploitation.

5.2.1. Contextual and structural ambidexterity

In order to reach ambidexterity, creating structural ambidexterity is standard approach (Birkinshaw and Gibson, 2004). Creating structural separation for different kinds of activities is crucial because they require different approaches. This separation may cause isolation between units due to lack of linkages. For this reason, contextual ambidexterity was developed by Birkinshaw and Gibson (2004). The research tool (*Table 3*) was used to explore tendency of the case company between contextual ambidexterity and structural ambidexterity. Implications of the research tool for the case company indicate that;

- Explorative and exploitative activities are not performed in separate subunits. Employees allocate their time to work on both explorative and exploitative activities.
- Decisions are made on the front line instead of at the top of the organization.
- Regarding role of top management, it is developing the organizational context rather than defining the structure and making trade-offs between exploration and exploitation.
- Nature of roles is relatively flexible.
- Skills of employees are more specialists.

The first four implications above show that the case company's structure fits in contextual ambidexterity. The last implication is conflicted with the first four. In contextual ambidexterity skills of employees are more generalists as they divide their time between explorative and

exploitative activities (*see appendix 3- the research tool with the results*). The research presents that contextual ambidexterity context is implemented in the case company.

In this thesis the case company's contextual and structural ambidextrous strategy and social support and performance management concepts were evaluated. The answers which are on the left column represent structural ambidexterity which create separated structures for different types of activities (*see appendix 3*). The answers on the right column of appendix 3 represent contextual ambidexterity which is newer than structural ambidexterity, and that calls for individual employees to make choices between alignment-oriented and adaptation-oriented activities in the context of their day to day work. As a result of this question, it shows that ambidextrous form of the company is quite close to contextual ambidexterity. Previous inquiry also confirms this claim.

This research admits benefits of contextual ambidexterity and how contextual ambidexterity leverage firms' ability to achieve ambidextrous level. Moreover, contextual ambidexterity concept encourages firms to let their employees for scheduling between exploration and exploitation individually. However, this thesis asserts that exploration and exploitation activities must be performed separately in independent subunits in case number of employees being limited under the time restriction. Structural separation of exploitation and exploration is beneficial when there are strongly integrated senior management team and shared vision (O'Reilly and Tushman, 2004; Jansen et al., 2009; Eriksson 2013). The important issue about structural ambidexterity is product launching can not be performed directly from R&D to market (Eriksson 2013).

Stretch, discipline, support and trust are four sets of attributes. These attributes are included by two contexts, performance management context and social support context. Performance management is composed by stretch and discipline attributes. Social support context is composed by support and trust attributes. In existence of these two contexts, organization can achieve the high performance organization context. It leads organizations to ambidexterity. In case, imbalance of these attributes in organization, organizational context become less than optimal.

Besides high performance management context, there are also three other contexts arising if organizational context is not optimal level. These contexts are burnout context, country club context and low performance context. The burnout context occurs when performance attribute at

the high level and social support level is low. Country club context happens when performance level is low and social support level is high. Low performance context comes up when both social support and performance contexts are not met (*see graph-1*).

Two lists of inquiry are developed by Birkinshw and Gibson (2004). The aim of these inquiries diagnosing the organizational context of a company by evaluating existence of stretch, discipline, support and trust attributes (*see appendix 1 and appendix 2*).

5.2.2. Social support and performance management context

In the case company, hierarchy in the organization and subunits, small improvements are handled by designers and production engineers while the big changes are under the permission of top managers. Daily basis improvements and innovations can be handled by team members without any permission on the other hand discontinuous innovations which makes big impacts are handle by permission of the top managers, the supervisors or the directors. Although individuals are not able to make radical changes in their works, they are able to divide their time to switch between exploitative and exploratory activities in this sense the case company has strong social support manner which provides ambidexterity.

Ghoshal and Bartlett (1997) define four sets of attributes interact to define an organization's context. These attributes are stretch, discipline, support and trust.

These attributes create two dimensions of organizational context:

Performance management is combination of stretch and discipline promoting the individuals to achieve high quality of results.

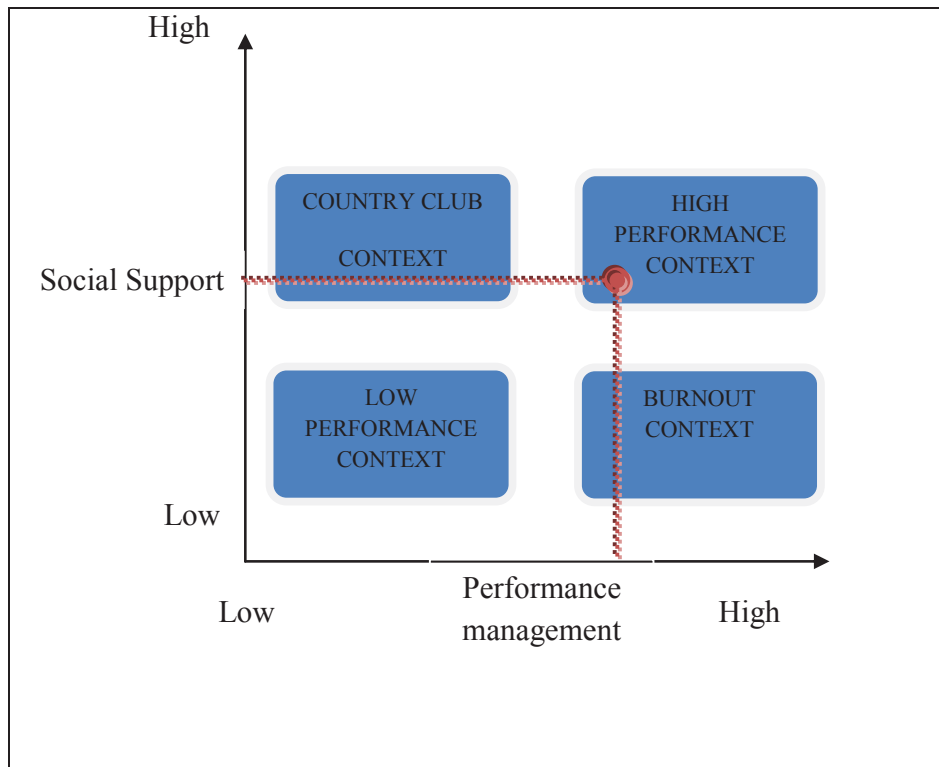
Social support is combination of support and trust providing friendly environment and tolerance to employees.

Lack of these two dimensions create low performance context in organizations.

The strong presence of these two dimensions creates high performance context that lead the organization to successful ambidextrous organization.

Lack of social support crates *burnout context*. Top-management driven approach manages individuals to perform enough. However, it undermines the relation between employees and subunits. This makes the ambidexterity hard to be achieved. Besides, strong social support without high performance drags the organization to *country-club context*. Employees may enjoy with highly supportive and friendly environment but the production and efficiency of their business become let up.

Another issue is the case company has communication problems between existing subunits such as R&D department and marketing department. The case company uses only customers' feedbacks to innovate more and also R&D department struggling with getting feedbacks from marketing department which are not so satisfactory and instructive to guide them through innovation. Thus, the communication skills between the subunits need to be strengthened. While they are independent on their own, efficient information flow between the subunits need to be provided for getting through to common goals in the organization otherwise, it may cause fatal failure and put the company's survival in jeopardy. If leaders in the company encourage the employees and the whole organization to participate and to be committed for common purpose of the company and teamwork are promoted in the company, this always brings positive impact for the company on the ambidexterity of management an individual level (Luzon, Pasola, 2012). Capabilities of managers to communicate and provide an effective communication are key factors to insure that a good strategy (Minoja, 2012). Nevertheless, in terms of leadership role and hierarchical aspect involved and visionary leadership seem stronger than top down and authoritative leadership which makes individuals more explorative as it is discussed before in the previous chapters.



Graph 2 - Social support and Performance management in the case company

As it can be seen in *graph 2* company's context is at the mid performance level which needs to be improved. Birkinshaw and Gibson (2004) mention the ways of escaping from suboptimal contexts. Firstly, the burnout context focuses too much on performance while social support is neglected and it undermines innovative potential of employees. In the country club context there is always a supportive environment which is based on trust and employees do not work too hard and it is dysfunctional just like burnout context.

Low performance context is the worst one among these suboptimal contexts. It does have neither supportive environment and trust nor ambitious performance goals. In this kind of organizations which is at the low performance level, the ambidexterity is impossible.

6. CONCLUSION

In this last chapter, findings and result will be discussed and emphasized relation with the research question. The main goal of this thesis was to investigate how organizations can reach ambidexterity.

This thesis was started with introduction to importance of ambidexterity, organizational ambidexterity, exploration and exploitation in case of long and short term organizational performance in sight of knowledge based and managerial perspective.

It also explored relations and tensions between these dimensions such as exploration and exploitation in terms of organizational and individual aspects, contextual and structural ambidexterity, social support and performance management, dynamic and ambidextrous capabilities with implication of case study research.

Exploitation and exploration are considered as two confronting elements due to limited resources in organizations. Balancing exploration and exploitation is one of the most important issues in management research (Chang and Hughes, 2012). Exploration is referred as experiential discovery of opportunities by researching what organizations do not have any knowledge about the technologies. Exploitation refers to how efficient firms use their assets (Bot and Renaud, 2012). Fundamental difference between exploitation and exploration is described as using existing knowledge and exploring new knowledge respectively.

There are capabilities which ambidextrous organizations should have as follows: avoiding major or sudden organizational changes, achieving higher performance and sustainability, obtaining higher sales growth, improving learning capacity, making profit by revolutionary and evolutionary changes and explorative and exploitative innovations (Tushman and O'Reilly, 1996).

The organizational ambidexterity is reached by individuals, subdivisions within organization successfully with proper strategies, methods, tools and processes by balancing and synthesizing these different and conflicting dimensional aspects. In order to achieve ambidexterity unit separation is not enough, there is also need for subsystems, strategies, procedures and cultures in an organization (Tushman and O'Reilly, 1997).

This thesis describes organizational ambidexterity as adequacy of firms for allocating essential resources to be successful at both exploitative and explorative activities. In this way, firms can return profit and guarantee their survival long term survival future in competitive business environment.

Different subsystems and strategies need to be governed by top management unit. By this means, centralized management approach prevents conflictions between these subsystems (O'Reilly and Tushman, 2004; Smith and Tushman, 2005; O'Reilly and Tushman, 2011).

The circumstances force organization to balance both exploitation and exploration activities and in which situation these both different dimensions support organizations survival were also explored. During product launching phase, firms need to allocate new resource for maintenance, customer supports for this new product. This situation puts firms into contradiction between launching new products and providing service for existing product (Schreuders, Legesse, Maxwell, 2012).

Moreover, this thesis explore how important organizations structure, environmental factors, managerial performance, social relations among individuals effect organizations success for ambidexterity. Strategies of organization are shaped based on dynamism and competence level of the environment.

Case study method is used with research tools (*see table 2 and table 3*). The first research tool intended to explore the case company's balance on exploration and exploitation. Moreover, it aims to find obstacles which hinder company's ambidexterity. The research explored that the case company has tendency to exploitation.

The second research tool aims finding the case company's tendency between structural and contextual ambidexterity (*see table 3 or appendix 3 – the research tool with results*). The research shows that the case company has tendency to contextual ambidexterity. According to Birkinshaw and Gibson (2004), in order to achieve ambidexterity, structural ambidexterity needs to be established. It can be considered as standard approach. Structural separation need to be created between the units which manage different activities.

On the other hand, separation causes isolation. In order to improve information flow among subunits, Birkinshaw and Gibson (2004) developed contextual ambidexterity concept to solve

this issue. In contextual ambidexterity, individuals are able to schedule their tasks. The research shows that the case company's structure fits in contextual ambidexterity (*see appendix 3*).

Nevertheless, this thesis claims that in cases where limited employees or time issue, contextual ambidexterity is not applicable.

Findings in the research show that communication skill of the subunits in the case company need to be strengthened. Subunits need to be independent from each other. However, they should be aware of other subunits' actions. In this sense, there is need for strong information flow between all units in the case company. Participation of employees and teamwork should be promoted by leaders (Luzon, Pasola, 2012).

In the case study, the author emphasized the implications of how the organization, individuals, managers and subunits manage exploitative and explorative innovation capabilities in the organization in the context of technological innovation, social support, managerial and performance skills perspectives.

Secondly, the feedbacks from the customers are the only factor which fosters the case company to be more innovative and there is no any other aspect which enlarges the case company's vision through innovativeness. This can undermine the case company's success and survival in the long term. The other finding which is related to ambidexterity is absence of any special unit which only manages explorative activities. The individuals need to divide their time to deal with exploitative and explorative tasks in daily basis.

This thesis suggests that establishing special subunits for explorative activities would not only leverage explorative processes in the organizations but it would also leverage exploitative activities. This issue causes time management and scheduling problem for the employees and also individuals are distracted by focusing on conflicting dimensions such as explorative and exploitative tasks.

The necessity of the subunit for exploration is also emphasized by finding the case company's tendency to the exploitative activities. This thesis suggests that, the individuals working on small improvements and regular tasks try to manage radical innovation projects and big improvements

as well; this situation may affect their judgments and kill their creativity in explorative activities. Individuals mostly divide their times by themselves for switching between exploitative or exploratory activities on daily basis.

Behavioral integrity is one of the most important subjects. Behavioral integrity is the key factor to provide consistency between subunits. Independent subunits with common vision lead firms to ambidexterity (Lubatkin et al., 2006).

Moreover, the communication problem between subunits is the most crucial issue for organizational ambidexterity. For instance, the marketing department collect the customers' requirements and it need to deliver these feedbacks to the R&D department to produce more satisfactory products for the customers and poor information flow between the subunits causes misunderstandings and crucial failures. Finally, firms with high levels of ambidexterity exhibit greater levels of strategic resources, decentralization, product-market strategy process effectiveness, implementation effectiveness, market performance, financial performance compared with low strategic ambidexterity firms (Kouropalatis, 2012).

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8. APPENDICES

Appendix 1: Evaluation of performance management context

Managers in the organization...	Not at all			Neutral			To a very great extent
Set challenging/aggressive goals	1	2	3	4	5	6	7
Issue creative challenges to their people instead of narrowly defining tasks	1	2	3	4	5	6	7
Make a point of stretching their people	1	2	3	4	5	6	7
Use business goals and performance measures to run their businesses	1	2	3	4	5	6	7
Hold people accountable for their performances	1	2	3	4	5	6	7
Encourage and reward hard work through incentive compensation	1	2	3	4	5	6	7
Average score for performance management context	5						

Appendix 2: Evaluation of social support context

Managers in the organization...	Not at all			Neutral			To a very great extent
Devote considerable effort to developing subordinates	1	2	3	4	5	6	7
Push decisions down to the lowest appropriate level	1	2	3	4	5	6	7
Have access to the information they need to make good decisions	1	2	3	4	5	6	7
Quickly replicate best practices across organizational boundaries	1	2	3	4	5	6	7
Treat failure in a good effort as a learning opportunity not as something to be ashamed of	1	2	3	4	5	6	7
Are willing and able to take prudent risks	1	2	3	4	5	6	7
Average score for social support context	5.2						

Appendix 3: Research tool - data collection chart to evaluate case company's tendency between contextual and structural ambidexterity.

			Other/Comment
How is ambidexterity achieved in your company?	Alignment-focused and adaptability-focused activities are done in separate units or teams	Individual employees divide their time between alignment (efficiency-profitability)-focused and adaptability-focused activities <input checked="" type="checkbox"/>	
Where are decisions made about the split between alignment and adaptability?	At the top of the organization	On the front line – by salespeople, plant supervisors, office workers <input checked="" type="checkbox"/>	
Role of top management	To define the structure, to make trade-offs between alignment and adaptability	To develop the organizational context in which individuals act <input checked="" type="checkbox"/>	
Nature of roles	Relatively clearly defined	Relatively flexible <input checked="" type="checkbox"/>	
Skills of employees	More specialists (70%)	More generalists (30%)	Mixed

Appendix 4: Research tool - Data collection chart to evaluate case company's tendency between exploration and exploitation

Task A, Task B, Task C, Task D	Task C -1 Task D -2 or All have equal importance etc... Task A -3 Task B -4
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Elements	Priority
<ul style="list-style-type: none"> ➤ Profit, cost ➤ Innovation ➤ Growth 	<ul style="list-style-type: none"> 1- Profit, cost 2- Growth 3- Innovation
<ul style="list-style-type: none"> ➤ Operations ➤ Efficiency ➤ Incremental innovation ➤ Adaptability ➤ New products ➤ Breakthrough innovation 	<ul style="list-style-type: none"> 1- Efficiency 2- Operations 3- New products 4- Incremental innovation 5- Adaptability 6- Breakthrough innovation
<ul style="list-style-type: none"> ➤ Operational competencies ➤ Entrepreneurial competencies 	<ul style="list-style-type: none"> 1- Entrepreneurial competencies 2- Operational competencies
<ul style="list-style-type: none"> ➤ Formal structure, mechanistic structure ➤ Adaptive structure and loose structure 	<ul style="list-style-type: none"> 1- Adaptive and loose structure 2- Formal and mechanistic structure
<ul style="list-style-type: none"> ➤ Margins ➤ Productivity ➤ Milestones ➤ Growth 	<ul style="list-style-type: none"> 1- Margins 2- Growth 3- Productivity 4- Milestones
<ul style="list-style-type: none"> ➤ Efficiency ➤ Low risk, ➤ Quality ➤ Customers ➤ Risk taking ➤ Speed 	<ul style="list-style-type: none"> 1- Efficiency 2- Experimentation 3- Flexibility 4- Speed 5- Customers 6- Low risk,

<ul style="list-style-type: none"> ➤ Flexibility ➤ Experimentation 	<ul style="list-style-type: none"> 7- Quality 8- Risk taking
<ul style="list-style-type: none"> ➤ Authoritative leadership ➤ Top down leadership ➤ Visionary leadership ➤ Involved leadership 	<ul style="list-style-type: none"> 1- Involved leadership 2- Visionary leadership 3- Top down leadership 4- Authoritative leadership

Appendix 5: Interview questions

Inquiry for Wexiödisk interview
1. Please give examples of four different types of innovations you have been working on the last five to ten years:
a) small improvements in existing products and activities that helps out them to operate more efficiently, or
b) architectural innovations which refers to changing some elements in the business such as technological, or
c) process based some components and elements, or
d) discontinuous innovations which are radical advances which change the whole market or industry.
2. Could you please specify the percentage of time you have worked with the four innovation types above, if the last year is 100% in total:
a) small improvements in existing products and activities that helps out them to operate more efficiently, or
b) architectural innovations which refers to changing some elements in the business such as technological, or
c) process based some components and elements, or
d) discontinuous innovations which are radical advances which change the whole market or industry.
3. Of the four different innovation types mentioned before, which are most similar (meaning could be employed almost in parallel), and which are most different from each other (meaning

must be employed in a sequence)?	
4. If you would design a structure of your department in term of project basis which structure would it fit in your organization (please motivate your answer):	
a) All department employees specialised on different product types?	
b) Some department employees working on <u>existing</u> technology/machines, whilst other department employees working on <u>new</u> technology/machines?	
c) All department employees are alternating working on existing and new machines, yet focusing on one technology for a couple of months at a time?	
d) All department employees working on all type of projects all the time?	
5. How do you keep track of development projects? Which tools do you use to manage project schedules for instance?	
6. Which ones is most similar for your organization when there is a project to be handled,	
a) <i>Functional designs</i> (are entirely dependent and integrated to regular organizational and management hierarchy).	
b) <i>Cross-functional teams</i> (are integrated to established organization but it is independent of management hierarchy).	
c) <i>Unsupported teams</i> (are entirely independent of established organization and management hierarchy).	
d) <i>Ambidextrous organizations</i> (are projects and efforts are organized as structurally independent, each unites has own strategy, culture and structure but also integrated in to the existing senior management hierarchy).	
7. - Which project tools do you use to manage project schedules and do you use critical path method to reduce gaps and time consuming between dependant and independent project based on their priority?	
e.g.	
Task A, Task B, Task C, Task D	Task C -1 Task D -2 or All have equal importance etc... Task A -3 Task B -4

Elements	Priority
<ul style="list-style-type: none"> ➤ Cost ➤ Profit ➤ Innovation ➤ Growth 	
<ul style="list-style-type: none"> ➤ Operations ➤ Efficiency ➤ Incremental innovation 	
<ul style="list-style-type: none"> ➤ Operational competencies ➤ Entrepreneurial competencies 	
<ul style="list-style-type: none"> ➤ Formal structure, mechanistic structure ➤ adaptive structure and loose structure 	
<ul style="list-style-type: none"> ➤ Margins ➤ Productivity ➤ Milestones ➤ Growth 	
<ul style="list-style-type: none"> ➤ Efficiency ➤ Low risk, quality ➤ Customers ➤ Risk taking ➤ Speed ➤ Flexibility ➤ Experimentation 	
<ul style="list-style-type: none"> ➤ Authoritative leadership ➤ Top down leadership ➤ Visionary leadership ➤ Involved leadership ➤ Bottom-up leadership 	

8- Please answer the following questions

			Other/Comment
How is ambidexterity achieved in your company?	Alignment-focused and adaptability-focused activities are done in separate units or teams	Individual employees divide their time between alignment (efficiency-profitability)-focused and adaptability-focused activities	
Where are decisions made about the split between alignment	At the top of the organization	On the front line – by salespeople, plant supervisors, office	

and adaptability?		workers	
Role of top management	To define the structure, to make trade-offs between alignment and adaptability	To develop the organizational context in which individuals act	
Nature of roles	Relatively clearly defined	Relatively flexible	
Skills of employees	More specialists	More generalists	

9- Please answer the following questions

Managers in the organization...	Not at all			Neutral			To a very great extent
Set challenging/aggressive goals	1	2	3	4	5	6	7
Issue creative challenges to their people instead of narrowly defining tasks	1	2	3	4	5	6	7
Make a point of stretching their people	1	2	3	4	5	6	7
Use business goals and performance measures to run their businesses	1	2	3	4	5	6	7
Hold people accountable for their performances	1	2	3	4	5	6	7
Average score for performance management context							

Managers in the organization...	Not at all			Neutral			To a very great extent
Devote considerable effort to developing subordinates	1	2	3	4	5	6	7

Push decisions down to the lowest appropriate level	1	2	3	4	5	6	7
Have access to the information they need to make good decisions	1	2	3	4	5	6	7
Quickly replicate best practices across organizational boundaries	1	2	3	4	5	6	7
Treat failure in a good effort as a learning opportunity not as something to be ashamed of	1	2	3	4	5	6	7
Are willing and able to take prudent risks	1	2	3	4	5	6	7
Average score for social support context							