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THE ENTREPRENEURIAL MANAGER'S EFFECT ON ORGANIZATIONAL LEARNING

Doctoral Thesis

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1. INTRODUCTION

According to Birkinshaw et al. [2014], management research needs to be phenomenon-driven. Researchers need to find a problem that has not already been answered in the literature. I wanted to examine a phenomenon or problem that would be interesting in both theory and practice: for top managers and strategic management researchers.

My research focus is organizational learning and adaptation. Earlier conversations with top and middle-managers made it clear that they found it difficult to interpret organizational learning as it is defined in the literature. They usually interpreted it as a learning process and gave it a positive meaning, even though learning from experience is often painful and may fail. Based on these conversations, I felt that managers did not use the academic construct of 'learning', but instead focused on constructs like change and adaptation to explain the same phenomena.

By widening the possible fields to include change and adaptation, I was able to find several phenomena that met the criteria of being important to both academics and managers. One in particular seemed especially interesting: *How is it possible that innovative, proactive organizations, previously able to grow, lose their adaptation capability even with an entrepreneurial manager, and how can this be interpreted?* I knew of several middle-sized or bigger Hungarian companies that were able to grow radically after political changes in 1989 and survived the economic crises in 2008, but now struggle with several problems affecting their financial performance. My research explores this phenomenon and will examine this problem using the processes of organizational adaptation and learning.

In my thesis, I want to examine learning in organizations from multiple perspectives and at multiple levels, with a more critical and challenging approach than most prior research. I think there is a huge need to investigate this phenomenon deeply, which requires multiple perspectives and a qualitative methodology using different data and a diverse sample. I want to examine the relationships between characteristics of the entrepreneur and the organization, the process of past and present learning and present and future learning capabilities. I also want to use a multidisciplinary

research approach to make possible a deeper understanding of entrepreneurial and organizational learning, adaptation and change.

> *"We understand that the only competitive advantage the company of the future will have is its managers' ability to learn faster than their competitors."*

This statement from a manager in Shell was quoted by Senge et al [2014, p. 21] in their work *The Dance of Change.* It highlights that the competitive value of learning and knowledge has grown. Competition has shifted from natural resources to knowledge, and according to several researchers, knowledge is now the main source of permanent entrepreneurial competitive advantage [Nonaka, Toyama, and Nagata, 2000; West and Noel, 2009; Presutti, Boari and Majocci, 2011].

The ideas of both 'organizational learning' and the 'learning organization' have a positive and idealistic meaning in the existing literature. The common assumption is that learning in the organization is important and the main source of future competitive advantage. Although this is indisputable, we still lack a universal answer to the question of how learning really happens inside organizations.

The field of organizational learning overlaps with several research areas, for example, knowledge management, dynamic capabilities, ambidexterity, adaptation, and change management. In this research, I examine organizational learning as an organizational adaptation process in entrepreneurial firms. In my opinion, the main facilitator of the adaptation process is the top manager of the organization. I therefore want to connect two different perspectives, managerial and organizational.

To identify the boundaries of my research, I start with an overview of the different organizational learning approaches. Morgan [2004] suggested that there is a proliferation of disciplines that lay claim to aspects of organizational learning. Table 1 shows "the main relevant disciplines, their ontological basis, theoretical domain with various difficulties identified in developing learning activities along with an indication of a set of writers, intended only to illustrate some of the work performed within these areas" [Morgan, 2004, p. 67].

Table 1: Organizational learning – disciplines, ontological bases and theoretical interests

Discipline	Ontological basis	Theoretical domain	Problem areas	Selected authors
Cultural Anthropology	Meaning systems	Culture as cause and effect of organizational learning, role of belief systems and potential cultural "superiority"	The inherent instability of culture and the relative properties of culture acting as an inhibitor to the transfer of ideas, whose culture dominates?	Adler & Cole [1993], Nevis, DiBella & Gould [1995]
Economics	Internal efficiency	Founded upon both game theory & agency perspectives, where the productivity problem is explained as error handling	Identifying the individual's motivation to admit, detect & correct error within productivity	Shapiro & Varian [1999]
Entrepreneurship	Firm growth & development	The interaction effects that learning capabilities can play in the entrepreneurship process	Entrepreneurs should attempt to develop an appropriate learning style, the perceived conflict between aspiring to learn & commercial realities of operational decision making	Deakins & Freel [1998], Chaston, Badger & Sadler-Smith [2000]
Management Science	Information systems	Knowledge systems and codification, information	Non-rational behavior, imperfect information, varying degrees of time horizon, information overload, unlearning	Hedberg [1981], Senge [1990], Huber [1991], March [1991]
Marketing	Information processing & market-based performance	Synergistic effects of learning & market orientation on business performance, learning commitment, information stocks and flows, behavioral elements in information processing, adaptation	Structural & organizational constraints, business unit culture, path dependency	Slater & Narver [1995], Lukas, Hult & Ferrel [1996], Hurley & Hult [1998], Baker & Sinkula [1999]
Production Management	Efficiency mechanisms	Productivity, learning curves, endogenous & exogenous learning sources, inputs to production design	Unidimensional measurement limitations, risk & uncertainty of outcomes	Argote, Beckman & Epple [1990], Adler [1993], Garvin [1993]
Psychology & Organizational Development	Human development	Organizations as hierarchies, relevance of context, perception & cognition, values and learning styles, dialogue	Defensive routines, cultural manifestations, unlearning, individual vs. collective learning	Kolb, Rubin & McKintyre [1973], Weick [1979], Dixon [1994]

Sociology & Organization Theory	Social structures	Power structures & their configuration, hierarchy effects, ideology and rhetoric, conflicting multiple actors' interests	Organizational politics & power struggles, sources of conflict	Shrivastava [1983], Nonaka [1988], Brown & Duguid [1991]
Strategy	Competitiveness	Organization-environment interface, alliance learning, network & interaction effects, industry level learning & market evolution, levels of learning & learning competencies	Dynamic fit between organization & environment, competitive pressures, technical versus general learning, learning transfer, speed of innovation practices	Fiol & Lyles [1983], Hamel & Prahalad [1993], Hannan & Freeman [1989], Inkpen & Crossan [1995]

Source: Easterby-Smith [1997, p. 1087] developed further from Dodson [1993] and Polito [1995] in Morgan [2004, p. 71].

The work of Morgan [2004] called attention to the different perspectives of organizational learning research. Table 1 shows that researchers from cultural anthropology to strategy can examine this territory through very different research questions, analysis and research units. This research aims to draw on two disciplines, entrepreneurship and organizational development which can connect the managerial and organizational levels.

The entrepreneurial view of learning limits its analysis to the entrepreneur and does not examine the organization as a whole. It therefore only examines the experimentation and opportunity recognition in the entrepreneurial process, and not the organizational development and learning behind it. Psychology and organizational development focuses on organizational learning as an intra-organizational, incremental process. This perspective describes organizational learning as human development and incremental adaptation, resulting in culture, routines and different learning styles. This perspective does not question whether organizational learning is always useful for the organization itself. By investigating the intersection of entrepreneurship and organizational development around organizational learning, I have attempted to overcome some of the shortcomings of each individual discipline. Figure 1 sums up the relevance of the collision of these two disciplines.

Figure 1: Learning from the entrepreneurial and organizational development approach

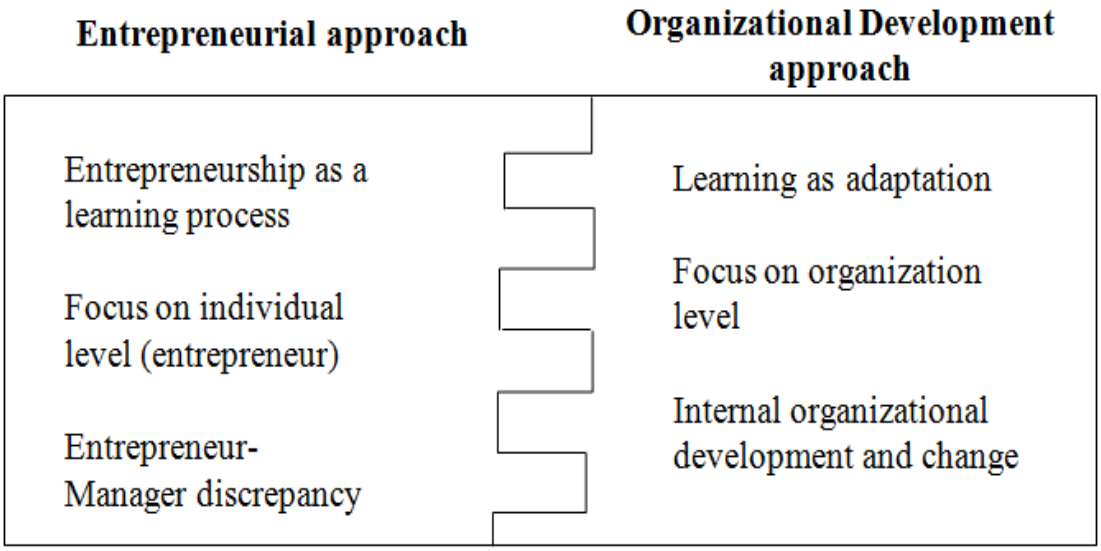
	In focus	Not in focus
Entrepreneurial approach	The learning style of the entrepreneur. The experimentation and opportunity recognition processes in entrepreneurial firms.	Organizational learning and development in entrepreneurial firms induced by the entrepreneur and change.
Organizational development approach	Organizational learning as a form of incremental adaptation. Routines, learning capabilities and learning processes in the organization.	Rethinking organizational learning processes. Differentiation between double-loop and single-loop learning in change, and adaptation.

Figure 1 suggests that if I want to investigate the entrepreneur manager's effect on organizational learning, I have to examine both approaches. To illustrate my interpretation of this phenomenon, I formulated my own organizational learning definition partly based on different existing definitions:

Organizational learning is an organizational ability and process of change in cognition and behavior, using both single-loop and double-loop processes. It includes interpreting and revaluating past experiences and actions, understanding current organizational performance and environmental factors, the unlearning of old knowledge and routines and generating new knowledge to grow and survive in the future. Organizational learning is therefore a process of adaptation to internal and external challenges.

To fill the gaps in literature across these two approaches, a simultaneous investigation is needed. Figure 2 shows how the additive examination of the two perspectives supports a better understanding of organizational learning.

Figure 2: The addition of the entrepreneurial and organizational development approach to organizational learning



In my opinion, the simultaneous examination of the entrepreneurship and organizational development perspectives, together with the individual and organizational levels, can help to fill the gap in the literature. The research objective is to develop our understanding about *how organizational learning happens in growth-oriented middle-sized companies and how entrepreneurial managers influence these processes.*

This research therefore aims to answer the following questions:

1. How does the process of adaptation and learning happen in growth-oriented middle-sized companies?
2. How do the different organizational levels and functions connect in the process of learning and adaptation (variation–selection–retention [Burgelman, 1991])?
3. What kind of relationship exists between the results of past adaptation and current adaptation?
4. What role does the entrepreneurial manager's learning process (cognitive and behavioral change) have in these processes?

In my thesis, I introduce the relationship between organizational learning and adaptation. I provide an overview of research on organizational and entrepreneurial learning. I then highlight the gaps in the literature and present my research

methodology. I conducted a qualitative case study using ethnographic data collection methods. The subject of my research is a company that made a financial loss in 2014, and experienced an intra-organizational crisis after several years of success. This was followed by 2.5 years of hard work until the company once again reached an acceptable level of profit. My research started in February 2015 and ended in May 2017.

I made the following assumptions:

1. *Previous learning and thinking about past experiences have an effect on current learning processes at personal, group and organizational level.*
2. *Organizational learning does not always have a positive effect on the organization.*
3. *The entrepreneurial manager's ability to make cognitive and behavioral changes has an influential role in shaping organizational learning as a process of adaptation.*

After examining the case, I sum up the main conclusions of my research and show what my work has added to existing literature, practice and methodology. I note its implications, and suggest directions for further research.

In this thesis, I want to fill a gap in the literature by:

- Highlighting the relationships between organizational learning and adaptation and change;
- Bringing together ideas from literature on entrepreneurial adaptation and organizational learning;
- Examining the cause-and-effect relationships through a longitudinal analysis to understand the learning process, especially as it is embedded in organizational routines;
- Analyzing individual, group and organizational learning levels through a 2.5-year, deep examination of a single case, to understand the processes of learning and the role of the top manager in these.

2. ORGANIZATIONAL ADAPTATION AND LEARNING IN THE LITERATURE

2. 1. Adaptation in the existing literature

In my thesis I want to understand the role of organizational learning in the organization's endeavor to overcome challenges. A fundamental question of strategic management and organizational theory concerns the relationship between a firm and its environment. In particular, researchers want to know how an organization is able to react fast and efficiently to the changes and challenges of the environment, and how organizations evolve, adapt and change with their environment [Smith and Cao, 2007]. Adaptation research examines this organization–environment relationship. Strategic adaptation means the organizational answers to environmental challenges [Szabó, 2012].

Nowadays organizations face ongoing macro-, industrial- and micro-level environmental changes [Balaton et al., 2007]. Modern organizations work in a heterogeneous, complex, dynamic, insecure environment [Lawrence and Lorsch, 1967], and these environmental factors change rapidly [Duncan, 1972; Oreja-Rodríguez and Yanes-Estévez, 2010]. Markets, especially with the development of the Internet, have become global. This transition challenges organizations [Balaton et al., 2010]. With the growth in competition, adaptation is crucial [Lawrence and Lorsch, 1967; Duncan, 1972]. It is not enough to modify or recreate your strategy, the organization or its culture must change too. Organizations that are able to learn or self-adapt can succeed [Barakonyi, 2007]. Thanks to the pressures from the changing environment, only dynamic organizations will be viable, and will have to change and adapt to survive [Szabó, 2008].

Managers have the opportunity to react differently to environmental challenges under the same conditions [Dobák, 2006], but as well as the environment influencing the organization, the organization also influences its environment [Child, 1972; Dobák, 2006]. Organizational adaptation and strategic behavior has long been the focus of international [Miles et al., 1978; Porter, 1993] and Hungarian [Antal-Mokos and Kovács, 1998; Antal-Mokos and Tóth, 2001; Hortoványi and Szabó; 2006a,b; Szabó, 2008] strategic research communities. There are also several studies investigating the

adaptation mechanisms and strategies of Hungarian companies during periods of environmental change, for example, during economic transformation [Balaton, 1999, Clark, Lang and Balaton, 2001] the EU accession [Balaton, 2005] and the economic crisis [Balaton, 2011, Balaton and Csiba, 2012, Balaton and Gelei, 2013].

"Based on Burgelman's conceptualization [1983, 1991, 1996], major changes in an organization's strategy need not be completely governed by external selection processes. Successful renewal is likely to be preceded by internal experimentation and selection processes" [Hortoványi, 2012, p. 47]. Burgelman [1991] interpreted this internal experimentation and selection as an organizational learning process. This concept is related to the view of organizational ecology [Hannan and Freeman, 1989].

Smith and Cao [2007] distinguished three different perspectives in the relationship between firm and environment. Table 2 shows the comparison between (1) ecology, (2) adaptation and (3) entrepreneurial perspectives.

The ecology view [Hannan and Freeman, 1989] suggests that organizations are entirely dependent on their environment for survival. The adaptation perspective suggests that firms can adapt and change to some extent, in response to environmental change [Nelson and Winter, 1982]. The entrepreneurial perspective, by contrast, proposes that:

- Through entrepreneurial actions, organizations can shape and influence their environments to their own benefit;
- Top management has an important role in this process;
- The initial unit of analysis focuses on managers [Smith and Cao, 2007], and in particular "how top managers search, undertake firm actions, and learn to shape the environment" [Smith and Cao, 2007, p. 331];
- The goals of each search and associated action are not taken as given, and that their adjustment is an important part of the dynamic change process. The process is therefore similar to Argyris and Schön's [1978] double-loop learning [Smith and Cao, 2007], while the adaptation perspective is akin to

single-loop learning. Unlike the other two perspectives, this one includes double-loop learning but focuses only on the belief system changes regarding the external environment.

Table 2: Comparison of perspectives on the firm–environment relationship

	Ecology perspective	**Adaptation perspective**	**Entrepreneurial perspective**
Theoretical focus	Environment selection	Environment-induced variation	Self variation
Assumptions:			
Organizational structure	Inertial	Path dependent	Malleable
Organizational change	Random, accidental	Reactive	Proactive
Level of analysis	Industry/population	Firm	Multilevel: managers to firm to industry
Timeframe of analysis	Long term	Middle term	Multitime: short to medium to long term
Corresponding literatures	Ecology Resource dependency theory	Fit Competitive dynamics Innovation as adaptation	Sensemaking Social cognition Entrepreneurial action
Firm-environment relationship	Random variations by the individual firms are selected by the environment. Over time, firms conform to the industry trend. The industry evolves through the birth and demise of individual firms.	Individual firm search to resolve misfit with the environment. The changes follow path-dependent routines and enable them to return to the fit condition.	Managers driven by belief systems engage the firm in entrepreneurial actions, which not only change their own belief systems, but also potentially change the market belief systems.

Source: Smith and Cao [2007, p. 331]

There are several works that recognize adaptation directly related to the concept of learning [Crossan et al., 1999; Eisenhardt and Martin, 2000; Zollo and Winter, 2002; Easterby-Smith and Prieto, 2008]. Other important contributions include:

- Senge [2014, p. 24.] claimed that "All organizations learn – in the sense of adapting as the world around them changes";

- Adaptation to the continuously changing environmental conditions is linked to the continuous learning of the organization and the continuous development of learning capabilities [Bakacsi, 1999]; and
- Jyothibabu et al. [2010] defined organizational learning as adaptation to the changes in operational culture, development of new ways of doing things, norms and paradigms.

It is clear from the literature that adaptation and learning are closely related. Adaptation research investigates the ability of an organization to change in response of external challenges. In my interpretation, to understand the adaptation–learning relationship, I must first examine the links between learning and change.

2. 2. Link between learning and change

Learning by definition is linked to change. According to Bakacsi [2004], learning is a permanent change in behavior that is the result of experience. Organizational learning can therefore be defined as a change in the behavior of the organization [Fiol and Lyles, 1985]: transformation of decision-making processes, or changes in the organizational members' routines that result in improvements in individual and organizational performance [Bakacsi, 1999]. Senge et al. [2014, p. 9.] quoted from Nitin Nohria that "inadequate learning capabilities limit most change initiatives". These ideas suggest that it is worth examining the linkage between learning and change.

Change, however, can be interpreted in several ways, often contradictory [Senge et al., 2014]:

- External changes in technology, customers, competitors, market, structure, or the social and political environment;
- Internal changes: how the organization adapts to changes in the environment; and
- Top-down programs, including reorganization and reengineering.

I believe that I first need to distinguish external and internal changes. External changes are outside the organizational borders. Internal changes are harder to define, not least because we can identify different aspects of them, for example:

- Individual vs. organizational;
- At process/task level vs. strategic level;
- Emergent/autonomous vs. induced [Burgelman 1991];
- Episodic vs. continuous [Weick and Quinn, 1999];
- Incremental vs. radical [Dobák, 2006]; and
- Cognitive vs. behavioral [Bakacsi, 2010a].

I do not wish to draw a comprehensive picture of change, but simply to highlight that it is important to systematize the different meanings and interpretations of change to understand organizational learning. Table 3 shows the most relevant change types, compared by their distinguishing features and link to learning research.

Table 3 shows that:

- Individual-level change can be linked to individual learning, and organizational change to organizational learning;
- Double-loop learning shows up in the literature around changes in the cognitive map and on the strategic level; and
- Internal non-strategic organizational-level changes (in processes, routines, behavior) are mostly related to single-loop learning. The double-loop learning aspect is missing from these studies.

Table 3: Different typologies of internal organizational change and their links to learning research

<table>
<tr><th>Types of change</th><th>Distinguishing feature</th><th colspan="2">Link to learning research</th></tr>
<tr><td>Individual vs. organizational change</td><td>Level and extensiveness of change</td><td colspan="2">Individual-level vs. organization-level learning</td></tr>
<tr><td>Process level vs. strategic change</td><td>Focus of change [internal or external change and challenges]</td><td colspan="2">Single-loop learning in routines as internal, process level change. Double-loop learning in strategy induced by external challenges, changes in the environment.</td></tr>
<tr><td>Emergent vs. induced changes</td><td>Direction and consciousness of change</td><td rowspan="3">Emergent/ Continuous/ Incremental change:
Basic territory of organizational learning research and the Learning School</td><td rowspan="3">Induced/Episodic/ Radical change:
No or just minor focus on this topic in organizational learning research. The field of change management</td></tr>
<tr><td>Continuous vs. episodic change</td><td>Periodicity of change</td></tr>
<tr><td>Incremental vs. radical change</td><td>Quality of change at organizational level</td></tr>
<tr><td>Cognitive vs. behavioral change</td><td>Quality of change at individual level</td><td colspan="2">Two types of double-loop learning. More focus on the changes in cognitive maps.</td></tr>
</table>

In this research, I will use the evolving change construct for emergent, continuous, and incremental changes, and the intentional construct for induced, episodic, and radical changes. Angyal [2009] examined the nature of changes, including undirected changes. He claimed that undirected changes can also be radical. I do not, however, wish to investigate these types of changes, which are mostly found in crisis situations.

2. 2. 1. Evolving change and learning

Mintzberg et al. [2009] described ten different schools of strategy, one of which is the Learning Schools. This looks at strategy as an emergent process. The antecedents of this school are disjointed and logical incrementalism and the evolutionary theory, resulting in a view of strategy as emergent, experimental and reflective. From the Learning School perspective, organizational learning has a huge role in the adaptation process of an organization. According to Szabó [2012, p. 17], "strategic adaptation is one main question of the Learning School, which cannot be measured

through classic financial indicators but mainly through the capability of knowledge creation and retrieval". Burgelman [1988, p. 74] takes "strategy making for a social learning processˇ.

Organizational learning includes the following statements based on the assumptions of evolutionary theory [Mintzberg et al., 2009]:

- Routines are responsible for creating change;
- The interaction between established routines and novel situations is an important source of learning; and
- The concept of emergent strategy opens the door to strategic learning because it acknowledges the organization's capacity to experiment.

The Learning School declares that deliberate strategy focuses on control, while emergent strategy emphasizes learning, and uses organizational learning to adapt to changes in operational culture. The Learning School therefore defines organizational learning as an emergent, incremental adaptation process, containing incremental change.

Besides the learning school, the cultural school is worth to overviewing. The cultural school interprets strategy formation as a collective process. To understand the cultural school a culture definition is needed. Mintzberg et al. [2009, p. 277] defined strategy in this way: „it becomes the 'organization's mind', the shared beliefs that are reflected in traditions and habit sas well as more tangible manifestations – stories, symbols, even artecrafts, products and buildings". I would like to highlight the following from the premises of cultural school:

- „Strategy takes the form of percpective, rooted in collected intentions. This is reflected int he patterns by which resources, or capabilities of the organization, are protected and used for competitive advantages. Strategy is therefore best decribed as deliberate (even if not fully conscious).
- Culture and especially ideology do not encourage strategic change so much as the perpetuation of existing strategy." [Mintzberg et al, 2009, p. 281]

Regarding the relation between culture and strategy Mintzberg et al. [2009, p. 291-294] highlighted the following characteristics: culture influences decision-making processem and the evolving and the overcoming the resistance to change. Culture acts as a perceptual filter, leading to a focus on some data for strategy making while ignoring others as an information filter.

Culture has a serious role in evoking the resistance to strategic change. Mintzberg et al. [2009] cite from different authors that characterize the mentioned phenomenon perfectly:

- „Before strategic learning… can occur, the old [dominant] logic must in sense be unlearned by the organization". [Bettis & Prahalad, 1995, p. 10]
- A corporation doesn't have a culture. A corporation is a culture. That is why they're so horribly difficult to change. [Weick, 1979]
- „Culture act as a prism that blinds managers to changing external conditions, but that „even when managers can overcome such myopia, they respond to changing events in terms of their culture" – they tend to stick with the beliefs that have worked int he past [Lorsch, 1986, p. 98]

All of these means that adical changes in strategy have to be based on fundamental change in culture [Bjorkman, 1989]. If we compare the view of cultural school to the view of learning school, the question will be more and more important: what relation is present between organizational culture, routines and organizational learning from the view of strategic adaptation. According to Noszkay [2008], incremental changes face less resistance and result in less subjective loss, but they are usually not suitable for solving systemic organizational problems.

These declarations raise the question of whether learning as an adaptation is always an emergent, incremental and experimental change process, but not radical and induced. I suggest that organizational learning includes radical, systemic change as well. In the following section, I examine the relationship between learning and this type of change

2. 2. 2. Intentional change and learning

Jyothibabu et al. [2010] contended that learning and change are not only parallel and simultaneous, but also interactive processes, as learning has a mediating role in the

change process. They also presumed that there is constant interaction between the individual and structural levels. Reaching a structural level in the learning process means, in practice, structural changes, which in turn affect the individual level and call for more individual learning. Structural changes are the result of intentional change. Rämmler [2013] proposes that individual learning fundamentally determine organizational learning, while Klimecki, Laßlaben and Thomae [1999] claim that management system and organizational culture have a main role in the flow of learning.

Weick and Quinn [1999] drew a distinction between two kinds of changes, episodic and continuous. They defined episodic changes as a form of short-term adaptation. Episodic change is most closely associated with planned, intentional change that can be characterized by the Lewinian approach [unfreeze, transition, refreeze]:

> "Intentional change occurs when a change agent deliberately and consciously sets out to establish conditions and circumstances that are different from what they are now and then accomplishes that through some set or series of actions and interventions either singularly or in collaboration with other people." [Ford and Ford, 1995, p. 543]

Dobák [2006] differentiated between radical and incremental change. Radical change is extensive and induced by the top management, and has influence on the whole or the majority of the organization. It is quite fast and means systemic change at all levels of the hierarchy.

The territory of intentional changes is the field of change management research, and organizational learning research also has unanswered questions in this field. Most of the research on organizational learning as organizational development focuses on learning as an evolving change process. There are, however, some researchers who suggest that it is important to examine learning in intentional change.

According to Dobák [2006], intentional organizational change is an iterative, learning process. Change managers have to manage this learning process, which includes their own learning as well the learning of the organizational members and the whole organization. Senge et al. [2014], in their book *The Dance of Change*, used the word *profound* for radical change. They claimed that there is learning in

profound change, and describe it as an incorporation of both an internal shift in people's values, aspirations, and behaviors, and external changes in the fundamental thinking patterns of organizations that underlie choices of strategy, structures, and systems. They declared that it is not enough to change strategies, structures, and systems, unless the thinking that produced those also changes. This type of change therefore involves a learning process with the same characteristics as double-loop learning.

Levinthal and Rerup [2006] introduced the constructs of 'mindful' and 'less-mindful' approaches to learning. They claimed [Rerup and Levinthal, 2013] that these approaches are relatively established in the existing literature. For example the less-mindful approach is set out in the work of March and Simon, [1958], Cyert and March, [1963] and Nelson and Winter [1982], and the mindful approach in the work of Weick and Roberts [1993] and Weick et al. [1999]. The less-mindful approach is related to evolving change while the mindful one is more about intentional change. Rerup and Levinthal [2013, p. 44] suggested that:

> "organizational learning must incorporate both perspectives in a broader synthesis to better understand where the benefits of less mindful processes ends and the benefits of more mindful processes begins (or vice versa), and whether the two phenomena intersect, interact, or operate in parallel."

They also proposed that these should not be regarded as separate or parallel but co-constitutive phenomena and concluded "today we know about how the co-constitutive relationship between the two phenomena unfolds and influences organizational learning and change across a system".

Bakacsi [2010] differentiated between first- and second-order change, the interpretation of single- and double-loop learning in change management literature. He pointed out that change needs a change agent or leader, who chooses between first- or second-order change.

It is clear that intentional and evolving change can result in different learning processes. I assume that the interpretation of adaptation and organizational learning has a key role in examining organizational learning. In the next section, I set out the research gap linked to these topics.

2. 3. The relation between change, adaptation and learning

I want to find an answer to the emergent mixture of entrepreneurial adaptation, change and learning. Previous efforts to grasp the phenomenon of organizational learning have mixed together change, learning, and adaption, with only casual attention to levels of analysis [Weick, 1991].

Figure 3 is a simplified version of Table 3, which tries to relate adaptation, change and learning. Based on this model, I have formulated the following propositions:

- Evolving change bears the marks of the adaptation perspective [Smith and Cao, 2007], while intentional change is much more related to the entrepreneurial adaptation perspective [Smith and Cao, 2007];
- Adaptation research focuses on changes in strategy linked to the environment–organization relationship. The internal processes of the organization are not in its main focus;
- Evolving change in the internal organization is the main field of organizational learning research. This can be characterized as an emergent and incremental experimentation process [Mintzberg et al., 2009];
- The field of intentional change at an intra-organizational process level is not the main focus of adaptation or organizational learning research. It is therefore an interesting area for entrepreneurial and organizational learning research.
- Intentional change needs double-loop learning.

Figure 3: Adaptation, learning and organizational change

	Evolving change	**Intentional change**
Change in strategy	Adaptation perspective	Entrepreneurial perspective
Change at process level	Emergent, incremental organizational learning	Change management

There is a gap in the organizational learning literature. Organizational learning is an internal adaptation process induced by the environment, but the adaptation literature does not focus on internal processes.

According to Rerup and Levinthal [2013, p. 39]:

> "Organizational actions are history-dependent, and the behavior in an organization is based on routines. Routines are based on interpretations of the past more than anticipations of the future. They adapt to experience incrementally in response to feedback about outcomes."

Future-oriented adaptation can therefore generate change in cognition and thinking, but behavioral changes will be dominated by the past. Cognitive change without behavioral change will not lead to success.

I suggest that organizational learning is a form of adaptation. The interesting question is whether organizational learning research provides answers to the following questions:

- Is there a need to examine internal organizational challenges from the organizational learning perspective?
- How can the earlier organizational adaptation be characterized using the constructs of organizational learning?
- Is the earlier adaptation process or organizational learning process always good and useful for the organization?

To answer these questions, I examine the existing organizational learning definitions, perspectives, models and measurement. My aim is to understand whether the dominant future-oriented and external focus is also present in organizational learning research.

2. 4. Adaptation in organizational learning research

2. 4. 1. Review of organizational learning definitions and perspectives

Organizational learning research overlaps with several other topics, including knowledge management, dynamic capabilities, entrepreneurship, and marketing. Another difficulty in investigating organizational learning is that there is no unified definition of it. Bontis, Crossan and Hulland [2000] collected together different definitions of organizational learning from the literature (see Table 4). These definitions show the different interpretations and orientations of organizational learning constructs and phenomena in research.

Table 4: Definitions of organizational learning

Author	Definition of organizational learning
Argyris & Schön [1978]	Organizational learning is a process of detecting and correcting errors.
Braham [1996]	Organizational learning is learning about learning. The outcome will be a renewed connection between employees and their work, which will spur the organization to create a future for itself.
Cavaleri & Fearon [1996]	Organizational learning is the purposeful creation of shared meanings derived from the common experiences of people in organizations.
Crossan et al. [1995]	Learning is a process of change in cognition and behavior, and it does not necessarily follow that these changes will directly enhance performance.
Daft & Weick [1984]	Organizational learning is knowledge about the interrelationships between the organization's action and the environment.
Day [1994]	Organizational learning includes the following processes: open-minded inquiry, informed interpretations and accessible memory.
Denton [1998]	Organizational learning is the ability to adapt and utilize knowledge as a source of competitive knowledge. Learning must result in a change in the organization's behavior and action patterns.
Fiol & Lyles [1985]	Organizational learning means the process of improving actions through better knowledge and understanding.
Huber [1991]	An entity learns if, through its processing of information, the range of its potential behaviors is changed.
Kim [1993]	Organizational learning is defined as increasing an organization's capacity to take effective action.
Lee et al. [1992]	The organizational learning process is viewed as a cyclical one in which individuals' actions lead to organizational interactions with the environment. Environmental responses are interpreted by individuals who learn by updating their beliefs about cause-effect relationships.

Levinthal & March [1993]	Organizational learning copes with the problem of balancing the competing goals of developing new knowledge and exploiting current competencies in the face of the dynamic tendencies to emphasize one or the other.
Levitt & March [1988]	Organizations are seen as learning by encoding inferences from history into routines that guide behavior.
Meyer-Dohm [1992]	Organizational learning is the continuous testing and transforming of experience into shared knowledge that the organization accesses and uses to achieve its core purpose.
Miller [1996]	Learning is to be distinguished from decision making. The former increases organizational knowledge, the latter need not. Learning may in fact occur long before, or long after, action is taken.
Nadler et al. [1992]	Learning requires an environment in which the results of experiments are sought after, examined and disseminated throughout the organization.
Schein [1996]	The key to organizational learning is helping executives and engineers [groups representing basic design elements of technology] learn how to learn, how to analyze their own cultures, and how to evolve those cultures around their strengths.
Scwandt & Marquardt [2000]	Organizational learning represents a complex interrelationship between people, their actions, symbols, and processes within the organization.
Slater & Narver [1995]	At its most basic definition, organizational learning is the development of new knowledge or insights that have the potential to influence behavior.
Stata [1989]	Organizational learning is the principal process by which innovation occurs. The rate at which individuals and organizations learn may become the only sustainable competitive advantage, especially in knowledge-intensive industries.

Source: Based on Bontis et al. [2000], Yeo [2005]

There are differences in the focus of these definitions. Some highlight the process character of organizational learning [Argyris and Schön, 1978; Fiol and Lyles, 1985; Stata 1989; Lee et al., 1992; Day, 1994; Crossan et al., 1999]. Others focus on changes in behavior [Levitt and March, 1988; Huber, 1991; Slater and Narver, 1995; Denton, 1998] or the shared nature of learning and knowledge in the organization [Meyer-Dohm, 1992; Cavaleri and Fearon, 1996; Scwandt and Marquardt, 2000].

Table 5 shows that organizational learning has different interpretations, from environment-oriented aspects to internal processes, from knowledge management to changing behavior, from future-oriented change to routines based on history. What is missing is a holistic definition. According to Lähteenmäki et al. [2001, p. 115], under the aegis of organizational learning, there is no holistic theory, because this would lead to the oversimplification of complex phenomena.

I do not wish to create a holistic model, but I do want to develop an interpretation of organizational learning that covers the questions identified about organizational learning as an adaptation process. Some studies have tried to capture the different aspects and concepts within this phenomenon, and from these, I have chosen to focus on the work of Shrivastava [1983].

Shrivastava [1983] developed four different concepts of organizational learning, viewing it as adaptation, assumption-sharing, developing knowledge of action–outcome relationships, and institutionalized experience.

Table 5 compares the four perspectives by their core ideas.

Table 5: Perspectives of organizational learning

Organizational learning perspective	**Core ideas**	**Major contributing authors**
Adaptive learning	Organizations adapt to changes in the environment by readjusting their goals, attention rules and search rules	Cyert & March [1963] Cangelosi & Dill [1965] March & Olsen [1976]
Assumption-sharing	Organizational theories-in-use result from shared assumptions. Learning involves changes in these theories.	Argyris & Schön [1978] Mitroff & Emshoff [1979] Mason & Mitroff [1981]
Development of knowledge base	Learning is the process by which knowledge about action–outcome relations is developed.	Duncan & Weiss [1978] Dutton & Duncan [1981]
Institutionalized experience effects	Learning curve effect extended to managerial decision making	Boston Consulting Group [1968] Abernathy & Wayne [1974] Yelle [1979]

Source: Shrivastava [1983, p. 10]

The first perspective, adaptive learning, has an external, environmental focus, which does not deal with the adaptation processes at the level of organizational processes and practices. The adaptation takes place only at the level of goals, search and attention rules, and in strategic thinking. The second perspective is about assumption-sharing and change in the theories driving these assumptions. It includes double-loop learning at the cognition level, but does not deal with behavioral

changes or rethinking organizational processes. The last two focus on the content of learning, knowledge and experiences rather than the process of learning. This differentiation shows that the perspectives of organizational learning cover the cognitive and behavioral questions and the content and process in different ways. Organizational learning as adaptation is an environment-focused question with strategic level change, but without any aspects of internal organizational operation and processes.

Hortoványi and Szabó [2006] applied a similar differentiation of organizational learning perspectives. Their first two perspectives are the same as in Shrivastava's [1983] work. The third is resource-based learning, which introduced the knowledge-based theory of the firm [Nelson and Winter 1982; Stein 1995]. The fourth perspective introduced the concept of the 'learning organization' [Senge 1990]. This interpretation does not differ much from the work of Shrivastava [1983], but Hortoványi and Szabó [2006] amplified the interpretation on the resource-based view and the learning organization perspective.

Gelei [2002, 2005] had a different approach to the organizational learning phenomenon. He set up three interpretations of organizational learning to mirror his subjective understanding and beliefs in organizational learning. There is no clear border between these approaches, and some overlap can be identified between the perspectives. Gelei [2002] claimed that his three approaches were different ideologies under the organizational learning phenomenon, and it is worth considering their similarities and differences.

The first is the process of embedded practical knowledge community formation. This approach interprets learning at the level of communities-of-practice, as a social construction process. The second is a new organizational logic that emerges in the dialogic process between dominant and innovation logic. This concept focuses on the future-oriented, innovation capabilities of the organization. The last is action learning and growing organizational self-control based on the reflective re-evaluation of organizational experiences. The last approach assumes learning is a reflective process. This perspective comes near to my interpretation based on reflection and re-evaluation of organizational experiences. Gelei [2002, 2005] did not, however, evaluate whether the reflection results are strategically useful for the organization,

but takes reflection as a common reality and critical interpretation of organization members.

According to Lähteenmäki et al. [2001], organizational learning theories can be divided into three groups that seek to answer elementary questions [Miner and Mezias, 1996, p. 115]:

- Who is learning – the individual or the organization?
- What factors affect learning – what are the elements of a learning organization?
- How does learning happen – what is known about the process?

To understand the different directions in organizational learning research, I first analyze the Learning Organization concept and after that one of the main models of the process approach, the 4I framework from Crossan et al. [1999].

2. 4. 2. The Learning Organization

Proper knowledge management and learning are only possible in an environment where continuous learning and experimenting are greatly valued, appreciated and supported [Garaj, 2008]. The Learning Organization concept engages in the question of how to establish conditions for future competitive advantage, and to survive in the present, through learning. 'Organizational learning' and the 'learning organization' are often used as synonyms, but based on their definitions, they are not the same. According to Yeo [2003, p. 369]:

> "Organizational learning is a process which answers the question of "how"; that is, how is learning developed in an organization? The term "organizational learning" is used to refer to the process of learning. On the other hand "learning organization" is a collective entity which focuses on the question of "what"; that is, what are the characteristics of an organization such that it (represented by all members) may learn? The "learning organization" embraces the importance of collective learning as it draws on a larger dimension of internal and external environments. The idea of "learning organization" refers to a type of organization rather than a process."

Table 6 sets out the different definitions of a learning organization.

Table 6: Definitions of a learning organization

Author	Definition of learning organization
Argyris [1993]	In a learning organization, individuals are the key where they are acting in order to learn, or to produce a result. Knowledge has to be generalized and crafted in ways in which the mind and brain can use it, to make it actionable.
Garratt [1995]	A learning organization is linked to action learning processes where it releases the energy and learning of the people in the hour-to-hour, day-to-day operational cycles of business.
Garvin [1993]	A learning organization is an organization skilled in creating, acquiring and transferring knowledge, and at modifying its behavior to reflect new knowledge and insights.
Marquardt and Kearsley [1999]	A learning organization has the powerful capacity to collect, store and transfer knowledge and thereby continuously transform itself for corporate success. It empowers people within and outside the company to learn as they work. The most critical component is the utilization of technology to optimize both learning and productivity.
Mills & Friesen [1992]	A learning organization sustains internal innovation with the immediate goals of improving quality, enhancing customer or supplier relationships, or more effectively executing business strategy, and the ultimate objective of sustaining profitability.
Marquardt [1996]	An organization which learns powerfully and collectively and is continually transforming itself to better collect, manage, and use knowledge for success.
Pedler et al. [1997]	A learning organization is like a fountain tree where the image of energy and life is characteristic of growth and survival. Organizational members are constituents of this fountain tree.
Senge [1990]	Learning organizations are organizations where people continually expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspirations are set free and where people are continually learning how to learn together.
Watkins and Marsick [1993]	A learning organization is one that learns continuously and transforms itself, and where the organizational capacity for innovation and growth is constantly enhanced.

Source: Based on Bontis et al. [2000], Yeo [2005]

The capability focus is observable in most definitions. Through the continuous learning capability, this concept is about innovation, new patterns, and growth. The capacity for double-loop learning is also a feature. To understand the learning organization concept fully, I examined Senge's [1990] and Garvin's [1993] works.

To establish a learning organization, Senge [1990] proposed five criteria:

- *Systems thinking:* This highlights the importance of interdependence and integrity. A system cannot be redesigned by dividing it into parts; it calls for collaboration and systematic thinking.
- *Personal mastery:* "Organizations learn only through individuals who learn. Individual learning does not guarantee organizational learning. But without it no organizational learning occurs" [Senge 1990: 139]. This factor means the organization's members' capability for learning.
- *Mental models:* Mental models are beliefs, mind-sets, values and assumptions that determine the way people think and act.
- *Shared vision:* Shared vision is not only a belief. It focuses on mutual purpose and sense of commitment.
- *Team learning:* Team learning is a process by which capabilities of group members increase. This learning is based on shared vision.

Steiner [1998] stressed that the relationship between the five disciplines and the way each affects the others, need to be closely examined.

According to Garvin [1993], learning organizations can be characterized by five main activities: (1) systematic problem-solving, (2) experimenting, (3) learning from past experience, (4) learning from others and (5] passing the knowledge on to others fast and efficiently. These can enhance capacity to obtain knowledge, and alter behavior based on knowledge and insight. Of the five, systematic problem-solving and learning from past experience are perhaps the most crucial.

According to Garvin [1993], an organization that learns possesses the ability to analyze problems systematically, based on data and going beyond the obvious symptoms to explore the underlying causes. He claimed that otherwise "the organization will remain a prisoner of 'gut facts' and sloppy reasoning, and learning will be stifled" [Garvin, 1993, p. 54]. This is not a classical, data-based analysis, but an ability to understand the hidden factors, the big picture and the systemic failures. I believe that without this, double-loop learning will be stifled, and the wrong conclusions will generate the wrong routines, fixing the underlying causes into organizational routines.

Garvin [1993] also proposed that companies must review and assess their success and failures systematically and have to record lessons from this assessment. This is close to the re-evaluation of past learning processes that is an important part of organizational learning.

In my view, the Learning Organization concept is functional only in an organization which does not suffer from previous failures to adapt and learn. This concept is future-oriented, asking the question *what should the organization do to be able to continuously learn?,* but does not question whether learning is always useful to the organization. The underlying assumption is that learning enhances organizational abilities and is always desirable for the organization.

Nonaka [2007, p. 164] claimed that "the knowledge-creating company is as much about ideals as it is about ideas: to create new knowledge means quite literally to recreate the company and everyone in it in a nonstop process of personal and organizational self-renewal". I want to focus on the dominant idealistic thinking about organizational learning and learning organizations in the literature. The work of Garvin [1993] identified similar issues, which I believe are missing from most organizational learning research, but they are not yet in an integrated framework.

Reviewing the learning organization models, I suggest that these concepts show an idealistic picture of organizational learning. They try to explain the factors that are needed to reach the ideal learning organizational state but do not deal with the change process, how an organization can become a learning organization and the facilitators and inhibitors in this process. I assume that this kind of thinking has roots in the dominant future-oriented adaptation, resulting in less thinking about previous adaptation and learning processes, which can have a huge effect on future ability to learn.

2. 4. 3. Introduction to the 4 I Framework

Bontis et al. [2002] described organizational learning as a process of strategic renewal encompassing individual, group and organizational levels (see Table 7). Crossan et al. [1999] created a framework, which they called 4Is, for intuiting, interpreting, integrating and institutionalizing, and used it to interpret organizational learning. Their framework is based on four premises:

- “Organizational learning involves tension between assimilating new learning (exploration) and using what has been learned (exploitation);
- Organizational learning is multilevel: individual, group, organization;
- The three levels of organizational learning are linked by social and psychological processes: Intuiting, interpreting, integrating and institutionalizing;
- Cognition affects action (and vice versa).” [Crossan et al., 1999, p. 523]

Table 7: The 4I framework of organizational learning

Level	Process	Inputs/Outcomes
Individual	Intuiting	Experiences, images Metaphors
Individual	Interpreting	Language, Cognitive map Conversation/dialogue
Group	Integrating	Shared understanding Mutual adjustment Interactive systems
Organizational	Institutionalizing	Routines Diagnostic systems Rules and procedures

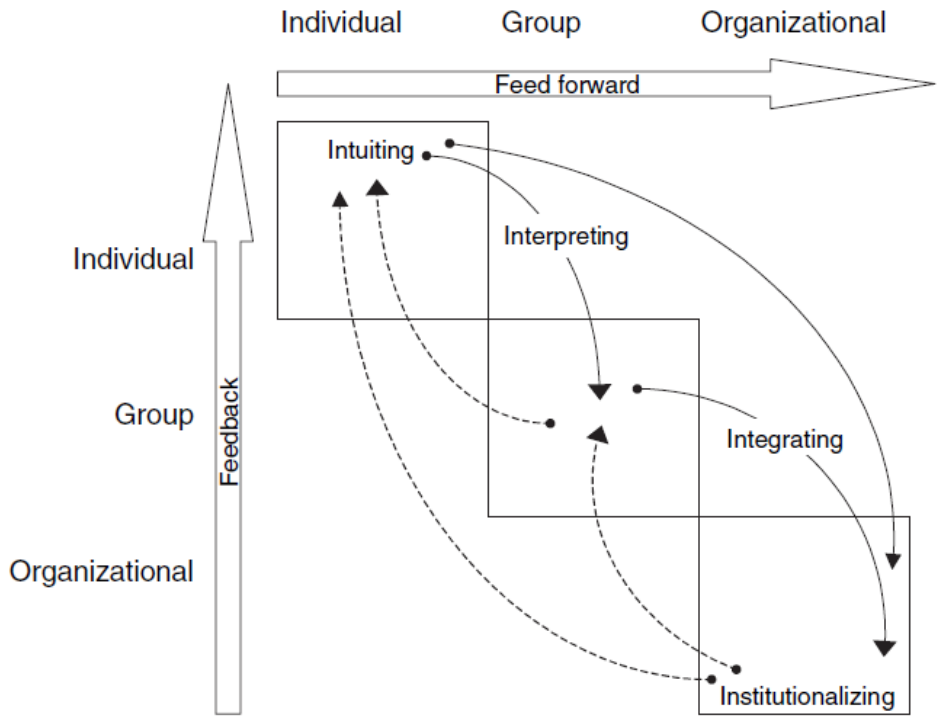
Source: Crossan et al. [1999, p. 525]

Bontis et al. [2002] defined stock and flow elements within the 4I framework. Learning stocks are the different levels (individual, group and organizational). Through these levels, knowledge can flow forward and backward. The institutionalized knowledge flows back from organizational level to individuals, while new knowledge creation happens at individual level and moves through group level. Ideally, it reaches the organizational level and becomes organizational knowledge. This is the ‘feed-forward’ flow.

Bontis et al [2002, p. 9] defined the learning flow as:

- Feed-forward learning: whether and how individual learning feeds forward into group learning and learning at the organizational level (e.g. changes to structure, systems, products, strategy, procedures, culture).
- Feedback learning: whether and how the learning that is embedded in the organization (e.g. systems, structure, strategy) affects individual and group Figure 4 shows this dynamic process.

Figure 4: Organizational learning as a dynamic process



Source: Crossan et al. [1999, p. 532]

From my perspective, the institutionalizing level is particularly interesting. At this level, the actions become routinized. According to Jones and Macpherson [2006, p. 157], "institutionalizing is the process of embedding individual and group learning into the organization's systems, structures, procedures and strategy". After this process, there is feedback learning, where the routines will be embedded in the organization.

This model is very useful to understand the processes of learning through different levels, but does not examine the quality of learning from an organizational perspective. Like most learning organization models, it also makes the underlying assumption that learning as an activity is always desirable for the organization. These models do not consider whether the content of learning and the created routines always support organizational performance. This model does not include the temporal factor and the effects of past adaptation, and I think these factors also need to be investigated. The authors of this model remark that examining the effect of management and leadership in these processes is an interesting research territory.

2. 5. Measuring organizational learning

After analyzing the different definitions and two main models, the learning organization concept and the 4I framework, I want to examine the topic from the measurement side. There are several different scales based on two main perspectives, process and capability. These two differ in their aims and dimension. The first one "aims to determine whether a certain process of organizational learning is being accomplished" [Chiva et al., 2007, p. 229], and means that this perspective looks for the results of learning in the organization [Jyothibabu et al., 2010]. Chiva et al. [2007] claimed that within this perspective, the measurement instrument tries to involve each phase of the organizational learning process, to determine their existence within the organization. Each of these phases is therefore taken as a dimension of the scale. These scales are based on models such as that of Huber [1991] or Crossan et al. [1999]. As examples, the scale used by Bontis et al. [2002] or Tippins and Sohi [2003] attempts to find the learning achieved at individual, group and organizational level [Jyothibabu et al., 2010].

The second perspective attempts to determine the organizational propensity or capability to learn [Chiva et al, 2007]. According to Jyothibabu et al. [2010], that means examining learning enablers in the organization. The measurement instruments are organized using the main facilitators of organizational learning as the dimensions. These measurement scales are mainly based on the learning organization literature [Goh and Richards, 1997; Hult and Ferrell, 1997; Jerez-Gómez et al., 2005; Chiva et al., 2007] and identify the main facilitators of organizational learning, then measure the organization's ability to learn or to provide a learning environment [Jyothibabu et al., 2010].

Table 8: A selection of organizational learning scales

Authors	Organizational learning measurement instrument	Aim	Conceptual background
Goh and Richards [1997]	Organizational learning survey scale [21 items]	Capability	The learning organization
Hult and Ferrer [1997]	The organizational learning capacity scale [23 items]	Capability	The learning organization
Pedler et al. [1997]	Learning company questionnaire [55 items]	Capability	The learning organization
Tannenbaum [1997]	Learning environment survey [69 items]	Capability	Individual learning
Hult [1998]	The organizational learning capacity scale [17 items]	Capability	The learning organization
Hurley and Hult [1998]	Learning and development [4 items]	Capability	Individual learning
Hult et al. [2000]	The organizational learning capacity scale [17 items]	Capability	The learning organization
Watkins and Marsick [2003]	Dimensions of the learning organization questionnaire [43 items]	Capability	The learning organization
Jerez-Gómez et al [2005]	Organizational learning scale [16 items]	Capability	The learning organization
Chiva et al. [2007]	The organizational learning capacity scale [14 items]	Capability	The learning organization
Bontis et al. [2002]	Strategic learning assessment map [23 items]	Process	Crossan et al.'s [1999] 4I framework
Templeton et al. [2002]	Measure for the organizational learning construct [31 items]	Process	Huber [1991]
Tippins and Sohi [2003]	Organizational learning [29 items]	Process	Slater and Narver [1995], Huber [1991]

Source: Based on Chiva et al. [2007, p. 230]

The existing organizational learning measurement scales (Table 8) try to capture the learning process or the learning ability of the firm. These scales differ from each other in the number of items they contain, so comparison of their results and validity can be problematic. They contain little focus on reviewing past experience, especially adaptation and learning. This aspect may be connected to the openness and

experimentation dimensions of these scales, but within this dimension the new ideas, innovations and external focus are dominant.

There are also attempts to create an integrated measurement scale to capture learning enablers, learning results and performance outcome [Jyothibabu et al., 2010]. Table 9 shows the main factors, constructs in organizational learning research and the usage of these factors in the different works investigating organizational learning [Marshall and Smith, 2009, p. 17].

Table 9 Organizational learning processes and facilitating factors: key constructs from the literature

	Fiol and Lyles	**Senge [1990]**	**Garvin [1993]**	**Ulrich et al**	**Nevis et al [1995]**	**Goh and Richards**	**Hult and Ferrell**	**Pedler et al**	**Lipshitz et al**	**O'Keeffe**	**Naot et al**	**Chen [2005]**	**Chiva- Gómez [2004]**
Interaction and review of external environment	✓				✓			✓	✓	✓		✓	✓
Performance measurement				✓	✓								
Use of benchmarking and best practices			✓	✓	✓			✓		✓		✓	
Experimental and innovative mindset			✓	✓	✓	✓		✓		✓		✓	✓
Climate of psychological safety					✓				✓		✓		
Continuous employee education		✓			✓			✓					✓
Operational variety					✓								✓
Knowledge transfer, storage and assimilation			✓	✓	✓	✓	✓		✓	✓	✓	✓	
Multiple advocates for ideas					✓								
Committed and supportive leadership				✓	✓	✓		✓	✓	✓	✓		✓

Strategic emphasis on learning	✓	✓		✓			✓	✓	✓				✓
Systems perspective		✓			✓		✓						
Team working and dialogue		✓				✓	✓	✓		✓			✓
Learning from past experience			✓	✓				✓				✓	
Organization and task structure	✓							✓		✓			✓
Employee involvement and empowerment				✓		✓		✓		✓	✓		✓
Accountability				✓					✓		✓		
Application of learning mechanisms and systems			✓	✓					✓	✓	✓	✓	
Clarity of vision						✓							✓
Shared beliefs	✓	✓		✓						✓			

Source: Marshall and Smith [2009, p. 17]

There is only one construct about reviewing the internal learning processes (learning from the past), and this has only a small role in examining organizational learning, compared to knowledge creation and experimentation, innovation and creative ideas.

The overview of organizational learning scales strengthened my opinion that there are still unanswered questions in research into organizational learning. Reviewing the definitions of organizational learning and learning organizational constructs, the learning organizational models, the 4I framework of Crossan et al. [1999] and the measurement scales, I identified that organizational learning research needs more critical and brave thinking to question assumptions that learning is only about the future, and always ideal and useful for the organization.

2. 6. Organizational unlearning

Besides organizational learning and the learning organizational literature there is an evolving field of unlearning. These researches start to raise that learning may have not just positive consequences, and prior learning affects and may hinder learning in the present [Starbuck, 2017]. Table 10 presents some unlearning definition.

Table 10: Definitions of organizational unlearning

Source	Definitions of organizational unlearning
Lee & Sukoco [2011]	Unlearning involves actively reviewing and breaking down the organization's long-held routines, assumptions and beliefs.
Newstrom [1983]	Unlearning is the process of reducing or elimination preexisting knowledge or habits that would otherwise represet formidable barrier to new learning.
Nonaka et. al [2001]	Unlearning is change in beliefs, norms, values, procedures and routines.
Prahalad & Bettis [1986]	Unlearning is the process by which firms eliminate old logics and behaviour and make room fro new ones.
Zahra, Abdelgawad & Tsang [2011]	Unlearning refers to the intentional discarding of practices, to create opportunities to explore new concepts.

Organizational unlearning is very important field in organizational learning literature because it examines the effects of prior knowledge and routines on learning processes in the present and future. Prior useful knowledge may hinder adaptation in case of transformed circumstances [Bakacsi, 2010a], the embeddedness of the old routines prevents learnig new routines [Howard-Grenville, 2005], so the failure to unlearn is a result of deeply embedded routines. The hardest is to unlearn knowledge which needs change in the way of thinking, and culture [Bakacsi, 2010a]. According to Zahra et al. [2011] unlearning refers to the intentional desplacement of well-established patterns.

Starbuck [2017] claimed that organizational unlearning starts with questioning old routines. This is the destabilization. Then comes the discarding part, which means letting go of old routines. In the end, the third part is learning new routines which is called experimenting in literature.

External environmental forces or internal failures are disruptions that may trigger initial destabilization of an old routine [Fiol, O'Connor; 2017. Long-term findings from psychology confirm that initial destabilizing disruptions are often important triggers (antecedent) taht provoke doubt about efficacy of old patterns of action and

understanding (Hayes et al, 2007] and they confirm that new learning is, indeed, an important outcome of unlearning [Norcross et al., 2011].

The evolution from individual to collective unlearning is similar to what Crossan et al. [1999] have described for learning processes in organizations (4 I) with one important distiction: an unlearning process is relatively more difficult to get started in the first place [Fiol, O'Connor; 2017].

2. 7. Single- and double-loop learning

According to Argyris and Schön [1978] an ideal organization is capable of double-loop learning, which means the cognitive map (assumptions and values) of the organization is able to change. That organizational members are able to define cognitive maps at the levels of individuals, group and organization is a precondition for double-loop learning. So they are able to understand the mover factors and to change.

Organizations are also capable of single-loop learning, change within the existing framework of norms and values. These two types of learning complete each other. In time of change single-loop learning, then in time of stability single-loop learning comes to the fore. Double-loop learning enhances the strategic responsiveness, since single-loop learning supports exploiting internal efficiency and continuous improvement [Argyris, 1977]. Single-loop learnig is called adaptive, double-loop learnig is called generative learning as well.

Single-loop learning is a general learning mechanism is organizations at process level. It is characteristic for behavioural learning at the level of routinizing. Routine is one of the basic categories of organizational learning, which means organizational abilities in behaviour, rules and patterns evolving in the past, that is and observable, predictable and recurrent way of behaviour of organizational members [Branyiczki, 1993].

Routine is part of organizational memory. Routines result in single-loop learning in the organization [Bakacsi, 2010a]. Real organizational learning occurs through organizational learnning if the cognivite map of the organization changes. This is double-loop learning at organizational level. Double-loop learning does not need continuous change in the organizational cognitive map. It is much more about the

ability, that the organization (members and manager) is able to define and question these frameworks.

To understand single- and double-loop learning it is important to make a distinction between cognitive and behavioural changes. The model (Figure 5) presents learning alongside these dimensions.

Bakacsi [2010a] describes each section this way:

In section 1 there is neither behavioural, nor cognitive change in the organization, so there is no organizational learning. Section 2 represents the case in which there is only behavioural change without cognitive change. So the way of thinking is not modified. In this case the organization usually copies already tested solutions or is forced to change its behaviour. The hidden assumptions are not questioned, there is only single-loop learning.

Figure 5: The cognitive and behavioural side of organizational learning

	There is no cognitive change	There is cognitive change
There is no behavioural change	1. There is no organizational learning	3. New recognition, change in interpretation and attitude without behavioural change – possibility to behavioural change
Theres is behavioural change	2. Copying already tested solutions, learning by copying, or force. Behavioural change due to single-loop learning.	4. New recognitions, new interpretetions and change of attitude result in new organizational decisions, stable change in organizational behaviour (behavioural change as a result of double-loop learning).

Source: Based on Fiol – Lyles [1981] and Branyiczki [1993], with modifications in: Bakacsi, [2010a]

Section 3 is the opposite of section 2, there are cognitive change and new recognition there, but without behavioural change. The organization perceives the need for change but it is not able to do that practically. This case is not learning just a possibility to learn.

Section 4 represents the simultaneous change in cognition and behaviour. In this case there is double-loop learning. According to Bakacsi [2010a] this is real organizational learning.

Lumpkin and Lichteinstein [2005] examined three distinct approaches to organizational learning: behavioral, cognitive and action learning.

Behavioral learning is an adaptive learning concept that includes trial-and-error learning and focuses on routines, organizational structures and systems. Cognitive learning examines the cognitive content of organizational learning and how changes in individuals' cognitive maps are aggregated and translated into changes in an organization's cognitive schema.

Action learning, by contrast:

> "…focuses on the moment-to-moment practice of correcting misalignments between 'espoused theory' (what individuals or organization say they do) and its 'theory-in-use' (what individuals or organizations actually do), to produce more effective action in real time. Action learning is primarily concerned with the patterns of belief and qualities of interaction between organizational members that facilitate (or constrain) the capabilities of the firm." [Lumpkin and Lichteinstein, 2005, p. 455]

Lumpkin and Lichteinstein [2005] interpreted action learning as a different kind of learning. They stressed that it generates the shift from single- to double-loop learning.

After the literature of adaptation and organizational learning in the following section I examine the individual level. I try to understand this level through the examination of entrepreneurial learning.

3. ENTREPRENEURIAL LEARNING IN LITERATURE

My research aims to explore the effect of top managers, especially chief executive officers (CEO-s), on organiztaional learning processes. Organizational learning or the unlearning of existing routines starts on individual level. In my research I want to focus on the entrepreneurial manager and his/her role in this learning process. From CEO-s I want to examine those, who have entrepreneurial characteristics, attitude. So in the following section I overview the existing literature in entrepreneurial learning. In my interpretation the 'entrepreneurial' construct is an attribute and not only a person who owns an enterprise.

3. 1. Relationship between the individualistic and organizational approach

Vera and Crossan [2004] also addressed a gap in existing literature, identifying that there is little evidence about the role of CEOs and top management teams in implementing organizational learning in their firms. They found that the management and leadership style influences the development of the stocks and flows of organizational learning. The entrepreneur has a pervasive influence on the learning ability of the firm, and his/her willingness to encourage learning in the organization greatly influences organizational learning [Chandler and Hanks, 1998; Stanworth and Curran, 2000; Jones and Macpherson, 2006].

Based on the model of Fuller and Moran [2001], which set out the ontological layers relating to entrepreneurship, Warren [2004] created a systemic model of entrepreneurial learning (see Figure 6). Warren [2004] suggested that entrepreneurial learning takes place at the individual levels (layers 5 and 6) and organizational learning takes place at the enterprise levels (layers 3 and 4).

Figure 6: Systemic model of entrepreneurial learning

Macro-economy	
Layer 1	**Network learning**
Layer 2	Inter-organizational Mental models shared across business/support agencies
Layer 3	**Enterprise learning**
Layer 4	Organizational Mental models shared across enterprise
Layer 5	**Entrepreneurial learning**
Layer 6	Individual Mental models shared on contingency basis with range of stakeholders
Physiology	

Source: Warren [2004, p. 7]

According to Warren [2004, p. 7], the entrepreneur's "learning processes must be effective in terms of personal development, and also impact successfully on the enterprise. Thus, successful adaptation of the enterprise is inseparable from, and is to some extent an emergent property of, the entrepreneur's learning". Ahlin, Drnovsek and Hisrich [2014] highlight, that the entrepreneurial creativity directly affects the level of innovation outputs. However researches have only little focus on the entrepreneur's learning effects.

There is a tension between the entrepreneur's capacity and growth of the enterprise. Many entrepreneurs operate alone or have few employees in the early stages of an enterprise. At this stage, the entrepreneur's influence is through the management of formal and informal relationships. As the organization grows, this loose and dynamic system boundary may well 'harden' as growing numbers of people become directly employed by the organization [Warren, 2004]. Life cycle theorists [Greiner, 1972; Churchill and Lewis, 1983] argue that the entrepreneur needs to adapt and change as the business moves into a growth phase. Painful learning crises can result if the personal learning and development of the entrepreneur lags behind the managerial

requirements of a growing organization [Cope and Watts, 2000]. With a maturing enterprise boundary, the entrepreneur must delegate and control, including about learning. Middle managers play a significant role in vertical organizational communication, learning and knowledge sharing [Csepregi, 2012; Gaál et al., 2012; 2013]. This delegation to middle managers can be a problem when the entrepreneur dominates the organization, relying on direct authority and high levels of informality [Rothwell, 1992; Vossen, 1998; Jones and Macpherson, 2006].

These problems and challenges are strongly related to the entrepreneur–manager discrepancy. As the entrepreneurial organization grows, internal processes and systems emerge and the organizational members begin to specialize. The organization begins to develop separately from the entrepreneur, as tasks and responsibility are delegated [Stevenson, 2006]. In this period, "highly creative entrepreneurs are sometimes unable, or unwilling to meet the administrative challenges that accompany the growth stage. As a result, they leave the enterprise and move on to other ventures" [Kuratko, 2009, p. 374].

Entrepreneurial activity is a type of behavior and administrative management is different from entrepreneurial management. Administrative managers focus on everyday work and operate the organization using routines. Entrepreneurs focus on directing and modifying market processes, search continuously for new ideas and opportunities and try to realize and exploit these new opportunities [Stevenson, 2006]. The entrepreneur aims for fast growth. An entrepreneurial culture therefore encourages employees to seek new opportunities and does not penalize failure. An administrative manager-dominated organizational culture tends to encourage failure avoidance [Szerb, 2010]. Leaders can vary widely in their attempts to implement organizational change [Pearce, Ramirez and Branyiczki, 2001]. There is a general slowness of organizational leaders to change their organization [Pearce & Branyiczki, 1997]. Entrepreneurs are special from this perspective. "An effective entrepreneur is not one who, from the outset, is able to plan a particularly effective organizational form, but one who is able to make an organization responsive to new information and reactive towards new opportunities" [Hortoványi, 2012, p. 34].

One of the most well-known ideas in this area is Schumpeter's [1980] claim that the entrepreneur ceases to be an entrepreneur as he/she starts to manage his/her enterprise. This statement places a negative slant on management. It also suggests that the entrepreneur will struggle to manage the organization. The conclusion is that only those entrepreneurs who are able to find the balance between being an entrepreneur and a manager will succeed in moving to the next stage.

> "Adaptive firms need to retain certain entrepreneurial characteristics to encourage innovation and creativity. The entrepreneur needs to translate this spirit of innovation and creativity to his or her personnel while personally making a transition toward a more managerial style. Remaining entrepreneurial while making the transition to some of the more administrative traits is vital to the successful growth of a venture." [Kuratko, 2009, p. 378]

The shift and balance between entrepreneur and manager is also crucial to organizational performance and organizational learning. However organizational learning is a separated research area, some entrepreneurial learning perspectives encompass the effect of the entrepreneur on the organization's learning processes, which is huge. According to Quinn [1978], entrepreneurs are facilitators of organizational learning. I therefore think it is important to examine in parallel entrepreneurial and organizational learning, looking at the intersection of the individual and firm level. To my mind, the intersection of entrepreneurial and organizational learning is an interesting and under-researched area.

3. 2. Researches of the entrepreneurial manager's learning

To be able to analyze the effect of entrepreneurial top managers on organization learning it is important to understand the existing interpretation of individual, entrepreneurial level in learning literature. I want to investigate the concept of entrepreneurial learning. This is an emerging area of literature at the intersection of organizational learning and entrepreneurship. Thanks to this complexity, the literature is diverse, and contains several interpretations of entrepreneurial learning, drawing on both areas. According to Erdélyi [2010], there are only few entrepreneurial learning researchers who are immersed in both research areas, so

In my view, this lack of holistic conception is not a problem but instead highlights that there are some research areas with unanswered questions. To introduce these questions, I start by exploring the different entrepreneurial learning interpretations in the literature.

Erdélyi [2010] made a detailed review of this topic and summed up the main results of entrepreneurial learning studies. In his opinion, the roots of entrepreneurial learning lie in the late 1980s and early 1990s. Studies in this period discussed the diffusion of innovation [Attewell, 1992; Van De Ven and Polley, 1992] or the role of networks in the entrepreneurial process in terms that imply some forms of learning [Birley, 1985; Dubini and Aldrich, 1991; Larson, 1991; Powell et al., 1996]. The true concept of entrepreneurial learning, however, only began to emerge in the late 1990s. Based on this, my conclusion is that the main roots of this research area are in entrepreneurship rather than organizational learning.

Erdélyi [2010] separated entrepreneurial research into two main groups. The first examined entrepreneurial learning as personal learning, and the second conceived it as collective learning. Table 11 shows this categorization.

Table 11: Different perspectives of entrepreneurial learning

			Example of authors
Personal learning	Management learning	As experiential learning	Deakins et al. [2000]
		As cognitive process	Crossan et al. [1999]
	Management education	In the workplace	Lans et al. [2008]
		Role of educational institutions	Wee [2004]
		Role of government agencies	Rae [2007]
Collective learning	Individual firm	SME, R&D unit	Van De Ven and Polley [1992]
	Network	Local network	Dubini and Aldrich [1991]
		National systems of innovation	Lundvall [1992]

Source: Developed from Erdélyi [2010]

The personal learning perspective can be divided into two main groups. The first includes research that takes entrepreneurial learning as a form of management learning [Deakins et al., 2000]. In this field, experiential learning has a strong influence. Within the personal learning perspective, there is an approach that tries to

capture the opportunity-recognition process and focuses on the entrepreneur's perception mechanisms during business opportunity identification and decision-making processes. In the second perspective, of learning as a cognitive process, researchers combine cognition with other approaches such as experiential learning [Corbett, 2005, 2007], the 4I framework of Crossan et al. [1999], or the psychological theories of creativity [Lumpkin and Lichtenstein, 2005].

In the next section, I will give an overview of the individual approaches to entrepreneurial learning in the existing literature. Entrepreneurial learning bears the marks of both entrepreneurship and organizational learning, but the real connection between the entrepreneur and the organization regarding learning is not clear. My aim is to highlight that both individual and collective approaches need to be examined in parallel to capture the real nature of learning in entrepreneurial organizations.

3. 3. Individual aspects of entrepreneurial learning

Holcomb et al. [2009] used the term 'entrepreneurial learning' in both a descriptive and qualitative sense. The descriptive sense refers to learning by people known as entrepreneurs, while the qualitative sense refers to a type of learning process by which managers recognize learning opportunities. I introduce these two approaches separately and then highlight interesting research questions about the different aspects of entrepreneurial learning.

3. 3. 1. Descriptive sense: entrepreneurial learning

The descriptive aspect of entrepreneurial learning uses certain assumptions:

> "Learning is not an optional extra, but is central to the entrepreneurial process: Effective entrepreneurs are exceptional learners. They learn from everything. They learn from customers, suppliers, and especially competitors. They learn from employees and associates. They learn from other entrepreneurs. They learn from experience. They learn by doing. They learn from what works, and more importantly, from what doesn't work." [Smilor, 1997, p. 344]

Learning plays pivotal roles in the new venture creation process, from developing the competencies needed to start a new venture [Erikson 2003] to recognizing opportunities and coping with the challenges of the external environment [Cope and Watts 2000; Harrison and Leitch 2005; Politis 2005; Fayolle and Gailly 2008]. According to Bagheri and Pihie [2011], the majority of entrepreneurial learning definitions are based on different aspects of the experiential learning model [Kolb, 1984], including experimentation, conceptualization, reflection and experience [Pittaway and Cope, 2007].

Politis [2005] identified three main components in the process of entrepreneurial learning. These were (1) entrepreneurs' career experience, (2) the transformation process, and (3) entrepreneurial knowledge, which encompasses recognizing and acting on entrepreneurial opportunities and coping with the liabilities of newness. Bagheri and Pihie [2011, p. 455] proposed that reflective learning was the most significant learning mechanism for entrepreneurs, because it "creates fundamental changes in their self-awareness and insights on how to manage their business effectively".

According to Harrison and Leitch [2007], entrepreneurial learning is still fragmented. There are therefore, a number of areas of learning in the context of entrepreneurship and the development of small and medium enterprises (SMEs), for example:

- New venture creation [Lichtenstein, Lumpkin, & Walton, 2000; Erickson, 2003];
- SME growth and development [Watts, Cope, & Hulme, 1998; Wyer, Mason, & Theodorakopoulos, 2000];
- Innovation [Sweeney 1987, 1988; Ravasci & Turati, 2005];
- New technology-based firm formation [Fontes & Coombs, 1996];
- Venture capital [Busenitz, Fiet, & Moesel, 2004];
- Enterprise training and learning capability [Ulrich, 1997; Chaston, Badger, & Sadler-Smith, 1999; Rae, 2000, 2004; Rae & Carswell, 2000, 2001; Chaston, Badger, Mangles, & Sadler-Smith, 2001; Taylor & Thorpe, 2004]; and
- Applications of the learning organization construct in SMEs [Leitch, et al., 1996; Choueke & Armstrong, 1998; Harrison & Leitch, 2000; Leitch, 2005].

These researches mostly takes the entrepreneur for a person who starts an enterprise, and mostly focus on learning processes in the starting or earlier phases of the enterprise.

3. 3. 2. Qualitative sense: opportunity recognition and intuition

In the qualitative sense, entrepreneurial learning is a way of thinking, in particular about opportunity recognition and intuition. Crossan and colleagues defined a learning process starting with individual intuition [Crossan et al., 1999; Dutta and Crossan, 2005]. They identified two kinds of intuition: expert and entrepreneurial intuition (see Table 12).

Table 12: Comparison of expert and entrepreneurial intuition

Expert intuition	Entrepreneurial intuition
Process of recognizing past patterns. The expert no longer has to think consciously about action	Capability to make novel connections, perceive new or emergent relations and discern possibilities that have not been identified before.
Rooted deeply in individual experience that can hardly be explained and examined	Related to innovation and change
Past-oriented	Future-oriented
Supports exploitation activity	Supports exploration activity

Source: Based on Crossan et al. [1999, p. 528–529]

Dutta and Crossan [2005] matched expert intuition with what they described as the 'Kirznerian approach' and the entrepreneurial intuition with the 'Schumpeterian approach':

> "The Kirznerian entrepreneur is essentially concerned with restoring balance in the economy by embarking on entrepreneurial opportunities that arise out of knowledge and of information asymmetries among its constituents. In contrast the Schumpeterian entrepreneur is primarily involved in a process of creative destruction in which entrepreneurial opportunities arise essentially as a result of a disequilibrating action of the entrepreneur" [Dutta and Crossan, 2005, p. 432].

Lecher and Kinghorn [2014] used this approach to compare expert and entrepreneurial learning based on three factors: (1) opportunity recognition, (2) opportunity realization and (3) problem-solving strategy (see Table 13).

Table 13: Characteristics of expert learning and entrepreneurial learning

	Expert learning	**Entrepreneurial learning**
Opportunity recognition	Opportunity discovery	Opportunity design
Opportunity realization	Strategy-adapted Path-dependent: honing and aligning Kirznerian view of entrepreneurship	Opportunity-enacted Path-breaking: shaping and configuring Schumpeterian view of entrepreneurship
Problem-solving strategy	Selection Intent: significant business benefit	Procedural Intent: general learning benefit

Source: Lecher and Kinghorn [2014, p. 76]

I therefore suggest that:

- Expert learning has similar characteristics to single-loop learning [Argyris, 1977] because of the non-conscious and path-dependent attributes; and
- Entrepreneurial learning is similar to double-loop learning [Argyris, 1977] due to the path-breaking nature, and its search for new and better ways of working.

The characteristics of expert intuition and learning are outside the qualitative sense of entrepreneurial learning, but these processes can also be characteristic for the entrepreneur.

Zoltayné [2002; 2006] investigated bounded rationality and the role of intuition in decision-making. Intuition is usually defined as knowing or sensing something without the use of rational processes. Gladwell [2005] defined it as: “The moments when we know something without knowing why”. He said that there are decisions

that cannot be explained rationally and the brain has an adaptive subconscious part that works in a special way. This kind of intuition resembles expert intuition.

In my opinion, entrepreneurial intuition has a dominant role in entrepreneurial learning and entrepreneurship. It is, however, also interesting to investigate expert intuition, especially when the entrepreneur has to manage his or her firm. I agree with Crossan et al. [1999] that organizational learning starts with individual intuition. The type of intuition therefore has an important part in formulating organizational learning. I assume that the entrepreneur has a main role in these processes and that his/her different types of intuitions can generate different learning processes.

In the next parts I use the entrepreneurial attribute in its qualitative meaning. So I do not want to examine entrepreneurs who start enterprises but top managers who bear the marks of entrepreneurial perspective and adaptation such as innovativity, proactiviy, risk-taking etc. To point this out is important in defining my research framework.

3. 4. Research gap in organizational learning and adaptation literature

According to Mészáros [2010, 2011], research and strategic thinking in the 1990s focused on questions about how past practice and processes can create patterns that shape the present and the future. That resulted in an exploitation and internal focus. Strategic management was criticized for having too much focus on present performance, and only a weak relation to the future. Entrepreneurship research, however, focuses on opportunity-seeking and has a dominant future-oriented perspective [Dobák, Hortoványi and Szabó, 2012]. It therefore results in a dominant future-oriented approach in entrepreneurial adaptation.

Entrepreneurial firms focus on environmental challenges and future trends and changes. This is, of course, crucial in survival and in competition, but shifts the focus of the entrepreneur to the external environment and the future. This does not force the entrepreneur to (1) seek challenges inside the organization, (2) question the earlier adaptation processes of the organization and (3) assess whether past organizational adaptation was always well-managed. This can result in biased adaptation.

The dominant focus on the future without examination of the past is observable in organizational learning research. The dominant future-oriented focus of adaptation diverts the direction of research from examining past learning and existing routines to learning and adaptation in the future.

Lähteenmäki et al. [2001, p. 118] made a critique of organizational learning research. They claimed:

> "The literature regarding both learning organizations and organizations learning is largely prescriptive in nature and proposes how organizations should be designed and managed in order to promote effective learning. There is [a] lack of conceptualization of the true nature of [the] organizational learning process."

I therefore suggest a more integrated interpretation of organizational learning as an adaptation process, incorporating single and double-loop learning, internal and external adaptation and changes in cognition and behavior. Moreover there is a need to examine the process of organizational adaptation and learning longitudinally and deeply, at different levels. The dominant future- and external environment orientation calls attention to the following:

- The future-oriented and external focus diverts attention from examining double-loop learning at the level of processes, structures and routines, which involve behavioral change and learning or lack of change and learning based-on path-dependency.
- Single- and double-loop learning are related to each other in both cognitive and behavioral change. It is therefore worth examining these phenomena together to get a more holistic picture of organizational learning as an adaptation process.

Table 14 summarizes the existing focus of organizational learning research and identifies a new focus to fill a gap in the literature.

Table 14: Existing and new foci in organizational learning

Existing focus	New focus
Learning as adaptation to external environmental challenges	Learning as adaptation to external environmental and to intra-organizational challenges
External focus	Internal and external focus
Change and learning in strategy	Change and learning in strategy and in intra-organizational processes
Through evolving changes	Through intentional changes
New knowledge creation	Existing knowledge re-evaluation, unlearning, new knowledge creation
Learning in cognitive change	Learning in cognitive and behavioral change

Research on both adaptation and organizational learning has not examined the path-dependency factors in adaptation, adaptation and learning in the past, and their effect on the present and future have not been the focus of researchers. Prior adaptation and learning research in my opinion, seeks ideal ways to adapt and learn and does not deal with what is really happening inside organizations. I therefore want to keep these thoughts to the fore and use a more critical perspective to examine entrepreneurial and organizational learning. This idealistic perspective characterizes the thinking about entrepreneurial managers. In my research the examination of the entrepreneurial manager's role in the process of adaptation and learning is a main point.

Therefore I want to analyze the process of organizational learning and unlearning in growth-oriented, proactive organizations with entrepreneurial managers (CEOs), and I want to understand the influence of the entrepreneurial manager on these processes. I want to explore these through a multilevel and longitudinal research. I present my research methodology in the next section.

4. RESEARCH METHODOLOGY

According to Maxwell [1996], research design needs to consider five factors. These are closely connected and need to be assessed together. They are goals, conceptual framework, research questions, methods and validity.

4. 1. Research goals

My research purpose is to conduct a thorough examination of the under-researched areas in organizational learning. Table 15 shows my research focus in more detail.

Table 15: My research focus

In focus	Not in focus
Intra-organizational learning	Inter-organizational learning
Entrepreneurial and organizational learning in the past and the present	Entrepreneurial and organizational learning in adaptation to future challenges
Learning of the entrepreneurial manager and its effect on a mature organization	Learning of the entrepreneurial and its effect on a starting organization
The examination of the entrepreneurial manager's learning, who is a top manager dealing with innovation	The examination of the entrepreneur's learning, who is the owner of an enterprise

My aim is to examine the intersection of the entrepreneurial and organizational development approach of organizational learning. The organizational adaptation and organizational learning literature mostly look into the future and prescriptive. The entrepreneurial approach, the entrepreneurial adaptation shows an innovative, risk-taking and proactive behavior. I want to analyze that how organizations, with such characteristics, with growth-orientation features in the past, with an entrepreneurial manager at the top, learn, how their existing knowledge affects their learning and adaptation processes and what the role of the entrepreneurial manager in this process.

4. 2. Conceptual framework and research questions

The conceptual context means the theories, findings and conceptual frameworks relating the researched phenomena [Maxwell, 1996]. In the literature review, I introduced my thoughts on entrepreneurial and organizational learning. My conceptual framework is based on the organizational adaptation model of Burgel man [1991] and the 4I framework of Crossan et al. [1999]. The following thoughts underpin my examination:

- There is adaptation in the organization as well, the main elements of this process are: variation, selection and retention.
- The learning process in the organization starts at individual level with individual intuition.
- The learning process reaches organizational level in the phase of institutionalizing, where individual and group learning is embedded into systems, structures, procedures, and strategy.
- After this process, feedback learning occurs, where the routines will be embedded in the organization.
- To understand organizational learning, different levels have to be investigated simultaneously and also longitudinally.

According to Maxwell [1996], research question formulation is about defining what questions your research will attempt to answer, and how these questions are related to one another. This part of the research design has to be closely integrated with the earlier two parts, the research goals and the conceptual framework.

I want to answer the following questions:

1. How does the process of adaptation and learning happen in growth-oriented middle-sized companies?

Shrivastava [1983] developed four different concepts related to organizational learning, including adaptation. The Learning School agrees that organizational learning is an adaptation process [Mintzberg et al., 2009]. This suggests that organizational learning has the main role in overcoming internal and external challenges in the organization. Adaptation research, however, has a dominant external focus and mainly stays at the level of strategy.

Crossan et al. [1999] suggested that organizational learning starts with individual intuition. Several researchers [Chandler and Hanks, 1998, Stanworth and Curran, 2000; Vera and Crossan, 2004; Warren, 2004; Jones and Macpherson, 2006] have claimed that organizational learning is inseparable from the entrepreneur, and that the entrepreneur has a huge influence on the organization's learning ability. Others, however, point out that the relationship between the entrepreneur and organization has not been examined deeply from a process perspective.

My aim is to explore the role of organizational learning at a process level, from an internal perspective, and I want to describe the entrepreneur's role in this internal adaptation process. I therefore formulated the following sub-questions:

1. How do the different organizational levels and functions connect in the process of learning and adaptation (variation–selection–retention)?
2. What kind of relationship exists between the results of past adaptation and current adaptation?
3. What role does the entrepreneurial manager's learning process (cognitive and behavioral change) have in these processes?

I formulated my own definition of organizational learning based on the literature:

Organizational learning is an organizational ability and process of change in cognition and behavior, using both single-loop and double-loop processes. It includes interpreting and revaluating past experiences and actions, understanding current organizational performance and environmental factors, the unlearning of old knowledge and routines and generating new knowledge to grow and survive in the future. Organizational learning is therefore a process of adaptation to internal and external challenges.

It is also important to determine how I interpret the construct of entrepreneurial manager in my research. The entrepreneurial manager is an executive manager, primarily the chief executive officer who bears the characteristics of entrepreneurial adaptation: such as innovativity, risk-taking, proactivity etc. It is important that I do not analyze individuals who has an own enterprise as entrepreneurs. Of course it is possible that these two are the same or overlapping.

To understand adaptation constructs at the same way I define the constructs variation, selection and retention:

- Variation: Different forms of experimentation, it can be characterized with newness compared to the existing activities, for example: new customer, product, process etc.
- Selection: Administrative and cultural mechanisms regulate the allocation of attention and resources to different activities and initiatives in the organization.
- Retention: The routinization process of the selected initiatives.

I made the following assumptions:

1. *Previous learning and thinking about past experiences have an effect on current learning processes at personal, group and organizational level.*
2. *Organizational learning does not always have a positive effect on the organization.*
3. *The entrepreneurial manager's ability to make cognitive and behavioral changes has an influential role in shaping organizational learning as a process of adaptation.*

In the following section I introduce the employed methods based on the research goals, conceptual framework, research questions and assumptions.

4. 3. Methods

The methods used will answer the following question: What approaches and techniques will you use to collect and analyze data, and how do these constitute an integrated strategy? [Maxwell, 1996]. In this part, I define my choice of research method, sampling decisions, and data collection methods.

4. 3. 1. Decision on method

The literature review includes different quantitative measurement scales. These scales only give the researcher a limited picture of the learning processes within the organization, and most are rather prescriptive. According to Chiva [2007, p. 229], however, empirical research on organizational learning has not only used scale

measurements and survey-based methods. Much of it uses qualitative methods [Finger and Brand, 1999].

Jyothibabu et al. [2010, p. 127] suggested taking into consideration the following issues when measuring organizational learning:

- "Search for ideal types of adaptive organization, double loop-learners or certain characteristics, i.e. enabling structures etc. If you cannot find them, you should question whether there is a possibility that we are striving for unrealistic, trivial or even dysfunctional ideal types.
- If possible, try to arrange comparative research settings.
- Focus on contingencies. It is misleading to claim that there is one 'best' structure suitable for every context.
- Elaborate the link between individual and organizational learning and focus on organizational-level phenomena rather than the individual.
- If possible, study learning in connection to organizational changes, but do not expect to find learning in all of them. Empirical results may be contradictory, if all the observable changes in organizational structures or processes are interpreted as organizational learning.
- Cognitively-oriented conceptualizations view learning as changes in mental models or theories-in-use. However, learning is an interactive process where the context is important.
- And finally, take a holistic approach to all organizational phenomena that could be connected to learning and try to identify the whole process of organizational learning."

These suggestions draw out a process and context perspective for measuring and examining the research questions. Chakravarty and Doz [1992] examined strategy research methods comparing content and process research. In my opinion, their conclusions on process research are also useful in organizational learning. They suggested that process research needs a range of more intrusive methods, including detailed longitudinal fieldwork. They commented: "Cross-sectional studies are only appropriate if the organization studied is assumed to be in a steady state of adaptation with its environment" [p.7]. Veresné [2010] suggested that analyzing a process has to include a precise determination of the examination's object and also a delimitation of

situation and operation analysis. I am interested in the whole adaptation process from the learning side, which means longitudinal research is required.

Maxwell [1996, p. 17-20] noted five particular research purposes for which qualitative studies are suitable:

- Understanding the meaning for participants in the study. Meaning includes cognition, affect, and intentions. In a qualitative study, the researcher is interested not only in the physical events and behavior that is taking place, but also in how the participants make sense of this and how their understanding influences their behavior.
- Understanding the particular context within which the participants act, and the influence that this context has on their actions.
- Identifying unanticipated phenomena and influences, and generating new grounded theories about the latter.
- Understanding the process by which events and actions take place.
- Developing causal explanations, where Miles and Huberman [1984, p. 132] argued that "field research is far better than solely quantified approaches at developing explanations of causality – the actual events and processes that led to specific outcomes".

Building on the propositions of Jyothibabu et al. [2010] and Maxwell [1996], and my purpose to understand the learning process and its contextual factors, especially the role of the entrepreneur, I therefore need to conduct qualitative research, and probably use case studies.

Yin [2003] recommended case studies when (1) "how" and "why" questions are being asked, (2) the investigator has little or no control over the behavior of those involved in the study, (3) the researcher wants to cover contextual conditions, or (4) the boundaries are not clear between the phenomenon and context. Case studies are also recommended when the aim is not generalization about populations in the statistical sense, but is to support "expanding theory instead of enumerating frequencies" [Hills et al., 1994]. A qualitative case study methodology provides tools to study complex phenomena within their context [Baxter and Jack, 2008].

Noor [2008] identified the strengths and weaknesses of case study research. Case studies enable the researcher to gain a holistic view of a certain phenomenon or series of events [Gummesson, 1991]. “Another advantage is that case studies can be useful in capturing the emergent and immanent properties of life in organizations and the ebb and flow of organizational activity, especially where it is changing very fast” [Hartley, 1994 quoted in Noor, 2008, p. 1603].

The critiques of case studies focus on the lack of scientific rigor and reliability and that they do not address the issues of generalizability [Johnson, 1994]. Qualitative research is often criticized, but its rigor, validity and generalization can be improved with triangulation of data and methods, proper sampling and reflection on the part of the researcher.

Triangulation provides an important way to ensure the validity of case study research [Denzin 1978]. There are different types of triangulation. Data triangulation is the use of multiple data sources in the same study. Methodological triangulation is the use of more than two methods to study the same phenomenon [Mitchell, 1986], and there are two types: between- and within-method type. I used the within-method type, where “multiple complementary methods within a given single paradigm are used in data collection and analysis in order to increase internal credibility of the research findings” [Hussein, 2009, p. 4].

I needed deep, longitudinal examination of intra-organizational learning processes. Using a case study methodology enables the researcher to explore and describe these processes, but it is not easy to ensure proper validity and reliability. I believe that with proper research planning, sampling strategy and data collection, I was able to ensure deep but also valid, rigorous and reliable results. In the next section, I explain my sampling strategy and data collection methods, and how I tried to ensure validity.

4. 3. 2. Sampling

Case studies can involve either single or multiple cases and employ an embedded or holistic design [Yin, 1994; Eisenhardt, 1989b]. I used the single case-method with an embedded design, which means that I investigated one case, which includes examining more actors. If I analyze more than two cases, and more than two participants in one case, that can contribute to data triangulation. My research unit

was dual: the first is the organization and the second is the entrepreneurial manager. To analyze the organization means more levels: top- and middle-level managers and front-line employees. Beyond these I analyzed the routines of the selected company that are run by the individuals throughout each level of the company.

A sampling strategy includes seeking the organizations/individuals for the sample. Qualitative researchers typically study a relatively small number of individuals or situations and preserve the individuality of each of these in their analyses, rather than collecting data from large samples and aggregating the data across individuals or situations. They are therefore able to understand how events, action, and meaning are shaped by the unique circumstances in which these occur [Maxwell, 1996]. Qualitative samples are often small for practical reasons, but this is not necessary. The essence of theoretical and aimed sampling is that the researcher chooses units to allow comparisons across the research questions, theory and explanations [Mason, 2002].

Table 16 sets out possible sampling strategies, collected by Miles and Huberman [1994].

Table 16: Typology of sampling strategies in qualitative inquiry

Type of Sampling	**Purpose**
Maximum variation	Documents diverse variations and identifies important common patterns
Homogenous	Focuses, reduces, simplifies, facilitates group interviewing
Critical case	Permits logical generalization and maximum application of information to other cases
Theory-based	**Finds examples of a theoretical construct and elaborates and examines it**
Confirming and disconfirming cases	Elaborates initial analysis, seeks exceptions, looks for variation
Snowball or chain	Identifies cases of interest from people who know people who know what cases are information-rich
Extreme or deviant case	Learns from highly unusual manifestations of the phenomenon of interest
Typical case	Highlights what is normal or average
Intensity	**Information-rich cases that manifest the phenomenon intensely, but not extremely**
Politically important cases	Attracts desired attention or avoids attracting undesired attention
Random purposeful	Adds credibility to sample when purposeful sample is too large
Stratified purposeful	Illustrates subgroups, facilitates comparisons
Criterion	**All cases that meet some criterion, useful for quality assurance**
Opportunistic	Follows new leads, takes advantage of the unexpected
Combination or mixed	**Triangulation, flexibility, meets multiple interests and needs**
Convenience	Saves time, money, and effort, but at the expense of information and credibility

Source: Patton [1990]; Kuzel, [1992], in Miles and Huberman, [1994, p. 28]

Table 16 highlights in bold the dominant criteria for my sampling strategy. I also used the propositions of Jyothibabu et al. [2010] to meet the requirements of validity and reliability. The sampling criteria I used are summarized as:

Criteria related to the organizational development and learning aspects

- Organizations operating at least ten years ago.
- Organizations with at least 50 employees and at least two managerial levels.
- Organizations, with the characteristics of growth orientation in the past and present as well
- Organizations, who were able to adapt to the external environment successfully in the past, but this successful process of adaptation was stuck at a stage

Criteria related to the entrepreneurial aspects

- Organizations in which the entrepreneur takes part in everyday work.
- Organizations where the entrepreneurial manager is responsible for strategic decisions.
- Organizations with the characteristics of risk-taking and innovation activities.

Criteria related to validity and reliability aspects

- Ideal and typical types of adaptive organization in terms of organizational learning.
- Organizations that can provide rich information.

4. 3. 3. Data collection

> "Qualitative research seldom follows a linear process from hypothesis formulation to data collection, data analysis and theory construction. There is, rather, a continual back and forth process between observation and interaction, description and interpretation, conceptualizing and theorizing." [Kvale, 1994, p. 14].

While recognizing that the ideal process is iterative, in this section, I set out my methods for data collection.

Spector and Davidsen [2006, p. 68] set out which aspects of organizational learning were measurable. They included:

- Actions, reflected in information flow, innovation, involvement, and results;

- Goal formation processes, including the ability to identify instances of goal cohesion and erosion;
- Leadership engagement, including vision-sharing and non-hierarchical exchanges;
- Reflective activities, including open exchanges to identify problems, assess situations and consider alternative solutions;
- Sentiments, reflected in attitudes and preferences for cohesion, respect, support, and trust;
- Team processes, including measures of collaboration, coordination, communication and co-mentoring; and,
- Tolerance for errors, including the encouragement of experimental and evidence-based reasoning.

To capture these aspects, I carried out an embedded case study with ethnographic methods. The employed methods in my ethnographic research meet the criteria of within-method type methodological triangulation. In next part I present why I chose ethnographic research method and how I collected data.

According to Chakravarty and Doz [1992, p. 7], "cross-sectional studies are only appropriate if the organization studied is assumed to be in a steady state of adaptation with its environment". I want to focus on the process of adaptation and learning, which needs longitudinal examination. In my research I analyzed a middle-sized company deeply through an ethnographic research with embedded case study method.

Ethnography is a longitudinal method, geared towards a process-based understanding of organizational life. Ethnographic data does not provide a snapshot-like view of behaviour and action, but instead focuses on their flow and interralationships. Ethnography is a method of 'seeing' the components of social structure and the process through which they interact. The researcher will be more than being merely an observer, he/she becomes a direct participant [Rosen, 1991].

The following list describes the main characteristics of organizational ethnography [Ybema et al. 2009, p. 6-9]:

- *Combined fieldwork methods: E*thnographic methods in organizational settings are combined field research tools of observing, conversing, and the close reading of documentary sources. Through the use of these different methods ethnographers are able to describe various aspects of organizational life: organizational actors' sensemaking practices across different situations, engaging with what people do and what they say they do, routine patterns as well as dynamic processes of organizing; frontstage appearances and backstage activities; the minutiae of actors' lifeworlds as well as the wider social and historical contexts in which these lifeworlds unfold.
- *At the scene:* Looking closely into the doings and dealings of organizational actors enables organizational enthnographers to describe the lived realities of flesh and blood people in their everyday organizatinal lives. Detailed renderings of objects, actors, events, language, and interactions open a window onto some of the everyday processes of organizational actors' meaning making.
- *Hidden dimensions: power and emotions:* In drawing close to subjects and situations, organizational ethnography has the potential to make explicit the often-overlooked, tacitly known and/or concealed dimensions of meaning-making, including its emotional and political aspects.
- *Context-sensitive and action-centered analysis:* Organizational ethnography also combines an orientation toward subjective experience and individual agency in everday life with sensitivity in the broader social settings and the historical and institutional dynamics in which these emerge or are embedded.
- *Meaning-making:* What this means in practise is, first, that ethnographers work to make sense of organizational actors' sensemaking, usually through the latter's own language and concepts, although these may be cast int he languange of culture, identity, scripts and schemas, values, feelings and beliefs, interpretative models of ans prescritives models for reality and the linke – in short meaning making. These symbols are studied by focusing on, among other things, such theoretical categories as narratives, discourses, stories, metaphors, myths, slogans, jargon, jokes, gossip, rumours, and

anecdotes found in everyday talk and text, rites and rituals, practices, customs, routines or built spaces, architectural design, clothing, and other physical artefacts.

- *Multivocality:* The interpretivist ethnograpic approach calls on the researcher to be alert to the potential multiplicity of voices and interpretations in organizational life.
- *Reflexivity and positionality:* Most interpretative ethnographers think of ethnographic knowledge as being generated in research and reseach participants are co-generators of ethnographic knowledge. In this view, research knowledge is situational, co-construated through interactions with others in organizational settings.

According to Van Maanen [1979] it is very important in organizational ethnography to separate based primarily on whose point of view is being reported, the informant's or the researcher's. The researcher has to distinct what he/she sees and how he/she interprets and understands these. Last the ethnographer must continually assess the believability of the talk-based information harvested over the course of a study. These tasks represent the essence of sound fieldwork [Maanen, 1979].

Golder-Biddle and Locke [1993] highlighted three main aspects in doing organizational research: authenticity, plausibility and criticality. Authenticity concerns the ability of the text to convey the vitality of everyday life encountered by the researcher in the filed setting. Therefore, the text needs to portray that the researchers were there and that the researchers grasped and understood the members' world as much as possible according to the member's constructions of it.

Plausibility means that the text is able to connect the reader to the depicted world through his/her personal and professional experience. So the text is presented in a way that it is able to convey to readers a sense of familiarity and relevance as well as a sense of distiction and innovation. Finally, the focus of criticality is on the ability of the text to actively probe readers to reconsider their taken-for-granted ideas and beliefs. The way the text delivers its message is vital in establishing the breaks or surprises which active readers to re-examine their assumptions [Golden-Biddle & Locke,

Rosen [1991] defined these important factors in organizational ethnography:

- The appropriate knowledge does not emerge solely from performing the actions of a task, but also from engaging in the social relations in which the task is embedded.
- Organizational secrecy needs to be dealt with carefully, since organizational policies, directions, and decisions are commonly safeguarded for strategic advantage, so it is not easy to get access to them. It is also important to use these carefully and ethically in analysis and presenting findings
- The ethnographer needs to build trust to be able to conduct successful research. He/she has to keep in mind that possible friendship relationships may influence the research, so he/she needs to interpret data carefully.
- The definition of the researcher's role is very important. As a direct participant, the ethnographer presumably shares the analyzed group's, unit's general framework of values and beliefs. Swiching back and forth between the organization participant (inside) and scholarly data gatherer (outside) roles can cause confusion and conflict among the ethnographer and his or her co-workers, who are his or her objects. [Rosen, 1991]

I conducted an ethnographic study in a middle-sized company. The company met the sampling criteria. I started the research in February 2015, when I first visited the company, and the data collection period ended in May 2017. In the early part of this period, my aim was to get to know the company. I focused on understanding the organizational structure, the members, their problems, and the organizational activities and processes. I therefore started my research with interviews at the company with people from different organizational levels:

- CEO
- 10 functional managers
- 8 employees in expert or supporting positions
- 4 group leaders at lower levels
- 8 front-line employees

The interviews generally lasted 3–4 hours, although the interview with the top manager took around 8 hours, and those with group leaders and plant workers were only around 1 hour long. The interviews were recorded, and the list of questions used is in Appendix 1.

After that, until around August 2015, I observed the production activities and processes of the company. I attended several different meetings and workshops as a participant observer, including daily production meetings, weekly managerial meetings, and product development meetings. In August 2015, I obtained access to the internal databases and networks, where I found several important documents and reports. I was also added to several e-mail lists, enabling me to follow internal e-mail communications at the company.

From 2015 to 2016, I spent on average one day per week at the company, rising to two or three days per week in the summer. My activities included data analysis, further interviews, mostly in the form of direct conversations, and observation of the daily activities, processes and events in the company. I tried to mingle with the organizational members, and spent time in the office of the production department, next to the production manager, in the sales office and when possible in the CEO's office. I was involved in several conversations, mostly in the mornings when the production team drank coffee together and discussed events. From 2017, I spent on average one day a week at the company. My data analysis took place between February 2015 and May 2017.

During the study period, I spent time on document analysis, participant observation and semi-structured and unstructured interviews, the latter mostly as casual conversations. I felt it was very important to explore the perspectives of different members and stakeholders before analyzing views.

I became, effectively, a part of the company, which has both advantages and disadvantages. The company members came to trust me, and recognized that I was impartial. They were therefore open with me during interviews and conversations. I was careful not to violate anybody's trust. I built good relationships with the company members, and we also talked about personal topics, which could lead to issues of bias and distorted interpretations, although I tried to avoid this by

interpreting data when I was not at the company and also trying to analyze all data critically. Since my research involved observing the everyday life of the organization, my presence also had an effect on those observed and the company itself. I tried to define, understand and interpret these effects critically during the analysis.

4. 3. 4. Data analysis

I used QSR Nvivo software to systemize my data. I imported all my data into this software, including daily notes, interview scripts, and documents. I sorted the documents, reports, and notes into monthly structured folders. I read all the imported documents several times and coded them for further analysis. Appendix 2 shows the codes.

During the study period, from February 2015 to May 2017, I gave feedback to the company on the results of the interim analyses. They evaluated these results and sometimes suggested new areas to explore.

4. 3. 5. My role as a researcher

I conducted a qualitative case study using ethnographic methods, so it is important to be clear about my role as researcher. The company knew that I am an external, independent expert who analyze the company. I explained it to company members from the start of the research, and tried to preserve my role during each interaction and conversation. In providing interim feedback, I tried to provide objective and analytical opinions. During data analysis, I also tried to interpret or estimate my effect on the organization and its members.

4. 4. Validity and reliability

Validity means finding ways to manage the plausible alternative explanations and threats to the potential conclusions of the study [Maxwell, 1996]. According to Bokor [2000] it is difficult to match qualitative research with classic validity and reliability requirements since context dependdence and multiple interpretation possibilities do not allow the strict, mathematical-statistical based approach.

With triangulation, the researcher can strengthen the validity of the research. I will use both data and methodology triangulation. Data triangulation requires collecting

data from more than two participants in an organization and by examining more than two cases in the research. Methodology triangulation means within-method triangulation. I plan to use different data collection techniques, in this case semi-structured interviews, document analysis and participant and direct observation.

I summarize the main risks and barriers of my research regarding validity and reliability:

- One case with unique organizational and environmental context may limit generalibility.
- The unique charactertics of the analyzed organization may limit the possibility of establishing a theoretical model.
- As a participant observer the researcher also affects the analyzed organization, that needs to be handled during analysis.
- The meanwhile possibly emerging friendships between organizational players and the research can distort objectivity.
- Even a participant observer cannot get a whole picture of the organizational processes.
- Organizational players may have different attitudes towards the researcher which may influence what they say to her and what they do.
- The time factor may distort the interpretation of results when data collection and analysis are far from each other in time.

This list presents the employed tools in order to reach the hightes reliability and validity as possible. I collected guidelines from Bokor [2000, p. 118]:

- The prior definition of the researcher's role. The acceptance of me as an independent player.
- Interviewing and getting to know all the relevant players and organizational levels. Comparing different views of organizational players with each other during analysis.
- Comparing information from observations with informations from interviews and conversations. Comparing the views of organizational players with their observed behaviours.

- Reading notes and interviews several times, and a hierarchically structured coding process.
- Bringing independent third parties into the analysis.
- Making the first version available for some interviewees, asking their opinion.
- Clearing premises at the beginning and during the research as well.
- The detailed presentation of data gathering analysis tools.
- Presenting relationship between conclusions and 'raw data', frequent quotations from the interviews.

4. 5. Ethical aspects

During data collection, I was aware of the importance of ethical use of the gathered data and information, both written and oral. This was especially important for information that was confidential or strategic. It was also important not to violate anybody's trust, so I did not share confidential information with anyone inside or outside the organization.

In presenting data and results, I did not name any interviewees, or the company, or describe its activity, customers or product portfolio. The topic of my research is closely related to strategy, but mostly to process aspects rather than content. This decision to limit the information disclosed in this way therefore did not affect the presentation and interpretation of the research results.

5. PRESENTATION OF THE STUDIED CASE

5. 1. Short introduction of the studied company

The company was founded in the mid-90s and is currently 100% Hungarian-owned. The company pursues manufacturing and commercial activities within a special sector of the food industry. The company has two establishments in two small countryside towns located approximately 50 km from each other. Both establishments carry out manufacturing activity. The number of people employed by the company is approximately 200, therefore it constitutes a medium-sized enterprise. The owners act as investors of the company, they are not involved in the operative management. The company‘s scope of activities is rather diversified, and although it operates in only one sector of the food industry, it exports its product to several diverse markets. The yearly income is ca. 6.4 million EUR.

5. 2. Customer portfolio

In order to gain proper understanding of the company context, it is important to briefly introduce the customer portfolio. The company has appr. 480 individual customers that can be grouped into 24 customer groups alongside 3 main markets. These 3 main sales channels are shortly presented below.

5. 2. 1. Regional market

One of the oldest markets of the company is supplying to the shops of the region, which the company refers to as the *“regional market”*. The customer mix is rather versatile within this channel, it includes supplying to the regional actors of multinational and Hungarian shops of the country, the points of sales of regional networks, individual customers, public institutions, as well as other actors with special needs, such as hotels. This regional market with diverse customer needs is responsible for a considerable part of the company’s income. This market is characterized by daily one or multiple deliveries, however, partly due to the frequent delivery, customers tend to purchase a low number of items but a wide range of products.

5. 2. 2. Central warehouse market

One of the newest markets of the company is supplying multinational companies, which is referred to as "central warehouse" in the company, due to the fact that it concerns the supply of large volumes of products to the logistical centres of partners as opposed to the shops as in the case of the regional market. This market is becoming more significant in the company's portfolio. The process started a few years ago, and this channel is currently responsible for 50% of the company's income. The number of customers is considerably lower in comparison with the regional market, however, larger volumes of goods are delivered at a time. Nevertheless, the company delivers to the central warehouse on multiple days within a week for the majority of partners, who are typically located in the vicinity of Budapest. Certain new products can only be introduced via tender processes that might take even months and are characterized by fierce competition regarding prices.

5. 2. 3. Own network of shops

Similarly to most of its competitors of similar size, the company also possesses its own shops bearing an own brand name, which are primarily located in major towns within the region where the company delivers anyway when serving the regional market. At the beginning of the research, the company owned 24 shops, which decreased to only 10 shops presently. The own network of shops predominantly sells products manufactured by the company, however, products purchased from other partners, i.e. "*foreign products"* can also be found on the shelves.

5. 3. Product portfolio

Due to the diverse customer portfolio, the product portfolio is likewise highly diverse. At the beginning of the research, the company had 327 different products, including several products that were variants of certain main products. The needs of the previously introduced 4 main markets are rather different, therefore, the company started manufacturing different products for these markets. The company fundamentally produces short shelf-life products, therefore, special technologies or various additives are necessary to increase product shelf-life. The company has manufacturing activity in 2 establishments, in 2 plants. The company serves the central warehouse markets and part of the regional markets and own shops from the main plant (Plant 1), but there are some products for the regional markets and own

shop that are only produced in this plant. The other plant (Plant 2), which is 50 km far from the main establishment, produces products for the regional markets and own shops but with a less developed technology as Plant 1.

5. 4. Organizational structure

The company employs a staff of 200 people. At the beginning of the research, the number of white-collar workers reached 31 employees, currently this number is 27. The company operates two establishments, the majority of the white-collar workers, 25 people work at the main establishment. The organizational structure of the company most resembles that of a functional organization, the primary principle for division of work is functional, however, in the second establishment, regional work division principles prevail, therefore the company cannot be regarded as a clearly functional organization. Furthermore, the customer-based work division principle is also present in the field of commerce, since the own network of shops has its own manager who do not deal with the customers of the other channels.

The chief executive officer of the company, together with many others in the organization, holds a degree in food engineering. The organizational structure of the company primarily follows functional principles. The organizational structure can be find in Appendix 3. The production is directly below the level of the chief executive officer, and is lead by two managers, one being responsible for the plants that operate on the main establishment, the other being responsible for independently managing the entire establishment.

Commerce also directly reports to the chief executive officer. At the beginning of the research, 6 people worked in commerce in manager or assistant roles: a commercial manager, in charge of managing commerce as the main partner of the CEO; a key account manager responsible for customer relations of the central warehouse market; a retail manager in charge of the own shop network; two regional representatives responsible for visiting partners of the regional market and customer relations; and a commercial assistant.

The company is administratively divided into two main areas: one is administration that involves accounting, finances and employment, the other area concerns taking product orders.

The company handles procurement separately, the procurement manager is responsible for the procurement of raw material and packaging material, as well as for managing the warehouse of raw materials and packaging materials. Furthermore, the technical area must be mentioned too which is primarily in charge of maintaining plant machinery and the technical maintenance of the establishments. Besides, the technical manager is responsible for the design of technical plans and the supervision of technical processes and activities.

5. 5. Major events between 2014 and 2017

I started my research in February 2015 and ended in May 2017. This is a quite long time in data collection and however it is just some years from the whole life of the selected organization, there were several changes and events during this time in the company's life that can give rich information for research. In the following section I introduce the major events of the company. In order to understand the events in 2015 it is important to give an insight what happened in 2014. So the story begins in 2014.

5. 5. 1. The company before 2015

Before 2015, the main market of the company was the regional market, complemented by the 24 shops of its own network of shops and a central warehouse supply still in its initial phases. The company, having recognized the potential of the central warehouse market, made considerable investment in the main establishment, A new subunit was formed in the main plant using this packaging machinery.

The company as an important regional actor was a serious competitor of actors of similar size. In spite of occurrences of quality and quantity complaints from a few customers, the company was able to satisfy the needs of the regional market.

In the second half of 2014, the company initiated a development for the central warehouse market of a customer that was served on the regional market as well. The duration of the development process was 1-2 months, however, it was only after the commercial listing that the company realized that contrary to expectations, the profit of this product is not 64 000 EUR but the listing of this product resulted in the loss of nearly the same amount. By the end of 2014, the company ceased to be profitable, and after years of profits amounting to 320 thousands EUR, the company closed the year 2014 with a loss.

5. 5. 2. The company in 2015

At the beginning of 2015, after the failures of 2014, the company decided to deal with its internal organizational and organizing problems. The aim was to create a more transparent and efficient organization. The intense part of this project lasted approximately for half a year, as a result of which new job descriptions were designed and a new system of variable pay and performance evaluation was prepared to be introduced in the plant.

During this period, especially in the first half of the year, great uncertainty characterized the company, which however also resulted in a closer cooperation between previously “distant” managers. The process was lead by the commercial manager at that time, who was also the chief operations officer of the company in 2015.

In the course of developing the project and processes, one production line of the manufacturing received a prominent role. The product that generated considerable loss in the previous year was introduced again on this production line, now characterized by a more efficient production and manufacturing process and a higher selling price.

Before 2015, the management drafted strategic objectives and concepts in a rather arbitrary manner, but these objectives were never actually implemented. In 2015, the Company attempted to improve organizational structure by redesigning job descriptions as well as appointing a new production manager. The strategy of the company, which was never officially drafted and was only culturally incorporated in the company’s daily life, had a strong emphasis on product development activities. The company aimed to achieve renewal by developing products, acquiring new markets and customers or by attracting customers from competitors. This attitude characterized all of its markets. Based on this approach, the practice of intense product development of the previous years continued, which this year primarily concerned the central warehouse market in volume and in focus alike.

In product development meetings, the key account manager would present tenders of the biggest partners which were discussed by the product development team, the so-called innovation team each week. The company submitted applications for nearly all

of these tenders which primarily meant that each time at least one product sample was prepared. This was normally the responsibility of the technologist. This also meant that following a meeting, even 10-15 products were listed for the technologist to prepare for a given deadline. Minutes were taken during these meetings that included what tasks needed to be done in relation to which products, what type of product sample should be prepared by the technologist and for which products, as well as the deadline for the products to be produced. The minutes furthermore included notes on improving product samples, primarily in terms of raw material and texture. The main argument generally was the following: *"the ability to develop a product sample shows our fast reaction ability. However we have tight time constraints regarding several tenders, we are able to crack out a sample." (Top manager)*

Product development meetings focused on introducing new products to production and sales, and not on developing and improving existing products. Occasionally, products of competitors were compared with own products, which lead to an approach being developed where the focus was shifted from product development to developing a product that was similar to the competitor's in case it was not included in the own portfolio before.

Product development concerned not only the central warehouse market but the regional and retail markets as well. This all lead to an expansion of the product portfolio, and the products to be listed and the number of items to be sold was determined predominantly by customer needs. The company did not set priorities; all product samples had equal importance.

"There were several product developments here that are produced now in a very little amount. But little amount can only be produced efficiently in a manufacte plant. Here it is not recommended to produce those product regarding costs, investment, margin…" (Technical manager from product development)

Monitoring the external market during this period did not go beyond monitoring the product portfolio of competitors. On the regional and retail markets, monitoring the customer portfolio also came to the fore. This was more significant regarding the partners that the company already supplied to. Traders regularly prepared

comparative price lists, furthermore, approximately every six months, the administrative department prepared a comparison based on the publicly accessible financial data of competitors.

The markets were handled completely separately, partly due to the fact that each market had its own responsible manager in the commercial area: retail customer base, regional market and central warehouse market. Handling the markets separately lead to separate product development for each market, and the production area and the technologist did not pay enough attention to warn the management that a module-based, subunit-based production, with a similar product mix would be more effective.

At the end of 2015, the production plant already warned about the difficulties that the production to the central warehouse market and the launch of seasonal products would impose on the production of the basic product portfolio for the regional and retail markets. The management, however, ignored this warning and left the resolution of the problem to the production area: “Solve it. We have always found a solution, we will solve it now too”. The management ignored these issues, which already showed signs that the plant was pushing its capacity on certain production lines to the limits.

By the end of 2015, retail operations and retail management became the focal point, since the decreasing performance and profitability of this branch fell behind their earlier levels, and according to the reports, the branch commenced generating loss. In 2015, the company started examining this and realized the necessity of a thorough examination of the retail stores, in other words, an assessment had to be made. The company at this point did not deal with the effect of the markets on each other. At the beginning of 2016, primarily upon pressure of the owners, the need for creating a strategy emerged, which was partly due to the profit and loss of the year 2014 and the situation and performance of the retail stores.

Overall, it can be stated that in 2015, the company did not deal with long-term strategic questions, strategic issues did not go beyond the introduction of new products. This was partly due to the fact that the company primarily concentrated on resolving internal problems of task-division.

As a result of the project and the closer cooperation in the company, the organizational processes and the communication improved, production became more efficient, and the company managed to turn the P&L into positive again by increasing the income and reducing the costs. At the end of the year, however, the retail "branch" that seemed to be stable before, started to generate loss. By the end of the year, the cooperation that characterized the first half of the year began to decrease and a reversal began to take place.

5. 5. 3. The company in 2016

Examining the retail branch already came to the fore at the end of 2015 and continued at the beginning of 2016 too. At the beginning of the year, upon initiation of the owners, the company recognized the necessity of creating a strategy for the company and the retail branch. Hence, the process of creating a strategy commenced. At the same time, product development processes continued, primarily for the central warehouse markets.

The official, formal process of strategy-creation began in February 2016. The process was triggered by the loss suffered by the retail "branch", and was initially based upon this market. The strategy-creation process took nearly one year by the time the company formally went through the process and managed to draft strategic concepts and plans. The people involved in the process were the CEO, the commercial manager together with other colleagues from the commercial area, the production manage and the technologist.

In March 2016, the management decided to primarily concentrate on retail stores during the strategy-creation process, therefore they prepared an analysis on how the retail stores were viewed in the region and on their performance. Besides the continuous monitoring of the retail stores' performance, a comprehensive examination of customers and products commenced that had the primary objective of reducing complexity.

At the beginning of 2016, 1-2 managerial meetings were initiated, followed by workshops, where the CEO and the commercial manager attempted to map the competing products, the less competitive products and data on what was being produced by the company, where and for what price. During these meetings, the

CEO would sit patiently for a while, then within a short time he lost his patience and left the meeting, he would even leave the room in the middle of a discussion. The attitude of the colleagues of the production area was mostly the following: "we cannot define which product is not effective on its own, because basically each product has at least a little margin".

The commercial manager expressed one main fear: *"We are ready to let go of a few products and even customers, but only on condition that it will be compensated by the production area on the expenses side, because if it doesn't, delisting a product directly leads to withdrawal of excess margin."* This analytic work lasted from March to August/September 2016, and resulted in the reshaping of certain products and the termination of certain products mainly produced in low quantities, these were delisted from sales.

This e-mail is a good example for illustrating the analytical process:

"15.07. 2016

Hi Everyone!

We have been through a rich 1-1.5 weeks regarding sales and transporting. Until now we have these results and definitions:

In transportation we analyzed the different routes, and we could make some re-organizations in order to rationalize: we have a suggestion to remove two routes, by moving certain customers to other routes and by letting go 4-5 villages. We have other suggestions too regarding more routes to be more efficient. These can generate savings for us, we calculate the punctual amount what how much we could save by these modifications in transportation.

On each routes customers generate margin, but they order a very wide range of rpoducts, so the solution is not letting go of several customers or whole markets, but rather is in having a limited product portfolio, and therefore customers at the regional market would be able to order from a limited assortment.

Customers are not concentrated along products, except the central warehouse markets. There are also channels (company shops) with several unique products.

We made suggestions for the product portfolio as well: products with low monthly and daily items will be delisted or merged into other products. Similar products, mainly variations of certain products, will be unified. This might reduce the production complexity without significant decline in incomes.

Next week we will follow the analysis with the production department. Simultaneously collegues of the commercial department will make up an ideal assortment for the regional markets.

Best wishes,

Commercial manager

The month of August brought an interesting and exciting change. In the month of August, a record number of probucts had to be produced in comparison to previous orders, which nearly lead to the collapse of the main plant in terms of one of the production lines. Therefore the company the step had to be taken to start producing products of the retail stores in a partially automatized plant instead of the main plant. This was unimaginable for the management before, not even the idea had ever occurred to them before. A particular product of the company was ordered in record number by the central warehouse customers and partners, and producing these products made it impossible for the retail products to be produced in the same plant. There were not enough products on stock, and there were certain products that the warehouse completely ran out of. At this point, the management regarded this as an emergency measure in order to ensure continuous supply, it was not considered a path to follow for the company.

The owners at this time were awaiting the strategy, the CEO and the commercial manager declared that focus should be placed on the central warehouse products and the two different activities should be separated in terms of the two plants and the markets. However, the management was still not convinced that this would be the direction to follow. This was mostly symbolized by the fact that the traders were still accounted for the reduction in volume of certain products and the letting go of certain customers, not to mention the fact that improving the competitiveness of the retail stores continued to be highlighted, and the management still did not see it

clearly that the performance of the retail stores was related to the performance of the other markets.

At the end of 2016, first in October and then in December, the strategy was presented to the owners, it became obvious that the owners supported the shift of focus to the central warehouse markets and agreed that the complexity of the activities had to be radically reduced. Taking the resources into account, a change was necessary as the previous strategy failed to function with respect to the inability to compete with the same results on each market. At this point, the management did not seem to fully identify with this, however, signs of it began to appear in communication. By the end of 2016, the strategy concept was created for the next year, the major milestones were defined which marked the main changes.

In the second half of the year, company morale was continuously deteriorating, the previously cooperating areas barely communicated face-to-face. Everything had to be recorded in e-mails in order to "be traceable", which significantly encumbered the smooth flow of processes, slowed down processes and lead to a continuously deteriorating morale and culture by the end of the year.

This e-mail illustrates well the morale at the company that time:

„Parts from an e-mail, 02.12.2016.

Dear Collegues!

This latter case is an excellent example for our group e-mailing methods whith absolutely no efficiency. So I would like to define some rules that we need to run from 2017. There are no group e-mails allowed from the new year. I do not want to see group e-mails about quarrels and telling of each others. In such cases I expect from the stakeholders to clarify their problems in one-on-one meetings and personally. If you are not able to arrange a solution, I will be available to talk about the certain problems.

I hope you will be partners to change our bad habits.

CEO"

5. 5. 4. The company in 2017

In 2017, significant changes took place. On the first days of 2017, the formal strategy of the company was officially created, covering among others the prioritising among markets, customers and product groups, breaking it down to functional strategies. Aspects that were previously not taken into consideration and were impossible to think about were now involved in the strategy.

Details from the strategy:

"We aim to build a company where each of us knows the directions, and we are going to realize it in a sincere environment. Our mentality must be changed in order to achieve this."

"Upon completion of the tasks, a more controlled and consistent operation must commence, where managers identify with the strategic objectives and reinforce the fulfilment of these objectives in their respective areas. In order to achieve the objectives, the organization shall continuously adapt to the strategy."

"Tools for control and coordination are: management meetings, individual reports, daily/weekly/monthly reporting, controlling reports, evaluation meetings for comparison of plans with results."

The company recognized that gaining one more customer or developing one more product would not bring about the solution, instead, the company should focus on certain products and customer groups and treat them as priorities against the other products and markets. Besides, markets that require entirely different activities, attitude and products will be handled separately from the previous activity as much as it is possible. Issues regarding resources and efficiency, as well as further growth based on aspects of efficiency began to be focused upon.

Hence, as a result of the previous year's work, the document referred to as "strategos" by the management was created by January 2017, which explicitly laid down the objectives set by the company as a strategy to be implemented at levels of the entire company and also broken down to functional areas. The main points of this strategy were presented in December 2016 to the owners, who granted their

approval. The functional objectives and the main steps of implementation, however, were finalized only by January 2017.

5. 6. Presenting the key actors of the company

In the following chapter, I am going to present the key areas and actors of the company, also elaborating on their improvement and changes during the examined time period. In certain areas and levels, where behavioural patterns are mostly homogeneous, I prepared group-level descriptions instead of individual ones. The analyzed interval (from February 2015 to May 2017) is appropriate for individual and group-level analysis because the staff at managerial and expert levels were constant during this time. If there was some change in staff, this did not affect the behavior and thinking of that department, so I do not deal with these in the analysis.

5. 6. 1. Chief executive officer - individual level

The CEO of the company holds a degree and has background in food engineering but he has managerial knowledge as well. He became CEO after working in the production area and he is the top manager of the company from several years. He had experience at companies abroad and in the capital from the lowest to managerial levels; he has considerable experience in production as a shift supervisor and plant manager. He is an expert in food engineering. *"I got to know the top manager as a great expert, with wide knowledge." (Retail manager said from the CEO)*

He is always open to newness; this can be seen is his everyday behavior as well. He thinks it is important for the organization to get continuously new impulses. He is constantly looking for new opportunities, primarily in terms of technical solutions, raw materials, product technology and product mix. He is continuously searching for learning opportunities in external markets and external environment, among others he attends professional exhibitions at least once a year. *"The external impulses are very important for us; these motivate us not to lag behind" (CEO)*. He is the main drive behind product development in the company, he believes that taking any business opportunity is beneficial for the organization, and even if it will not lead to sales, the organization will learn as a result.

His prior experience what his superiors used long ago is determinant in forming his leadership activity. He generally employs these in managing. He grants great authority for his employees, he does not interfere in daily operations, however, his subordinates are not consistently accounted for either. His general approach to arising problems is the following: *"You are capable of doing it, resolve it somehow."*

He usually drifts situations when middle-managers do not dare to decide alone. In these cases he needs to deal with operative questions and processes too. "*I need to take 90% of decisions at the company, it is usual that collegues come into my office unprepared to ask for approval or final decision."*

5. 6. 2. Commercial department – group level

At a group level, the commercial department is not very homogeneous due to the fact that traders are responsible for different markets. They agree on certain matters, however, primarily on the fact that *"production hinders commerce, and instead of market expansion, constant problem-solving and complaint handling became the main task of commerce".* In the following section, I am going to present the main staff of this department.

5.6.2.1 Commercial manager – individual level

The commercial manager is the second person in the company hierarchy after the CEO. In 2015, following the management decision of redesigning job descriptions and thus updating the roles and responsibilities, he became the chief operations officer (COO) of the company, i.e. he was not only in charge of commerce, but also of other areas in a project-based manner. These areas included production, accounting, finances, procurement, technology, etc. As a result, he learnt a lot about the whole organization, what points needed to be improved, where the problems were in the processes. His coordination activity had a key role in the process during the company started to improve in 2015.

He has a prestigious reputation among his colleagues, especially in the commercial area. He maintains a friendly relationship with the CEO, they have been "fellow warriors" for a long time. He is skilled at recognizing business opportunities; however, he has a more sensible attitude than the CEO. All employees of the

company acknowledge his work. He is respected and employees listen to him, on some occasions even more than to the CEO.

He is concerned about the production processes, among others for the reason that serving customers is increasingly problematic and most of the time he is the one who has to resolve or alleviate these problems through his connections. *"Sometimes I wonder that we sell that amount of products because the quality is so low… I constantly have to explain ourselves, and the others at the company do not note that these have consequences. The turnover decreases, we do not know how to increase it. The others in the office do not know what the situation on the field is. They just say we always bug them". (Retail manager about the quality of production)*

His way of thinking is capable for questioning the existing things. Only this thinking was not enough for generating long-term behavioral changes in the company, because the approaches of other departments.

5.6.2.2 Retail manager - individual level

The retail market benefits from the advantages of being "in the house" and simultaneously also suffers from its disadvantages, since exactly for this reason if any problem occurred, the company decided to burden its own shops with the daily loss, surplus or waste products, for believing that this market was the least vulnerable. The retail manager considers this a major problem in the company since he believes that the company cannot be competitive this way. The retail manager is solely responsible for the commercial activity of the own network of shops, he is also the one who carries out the procurement of "foreign products" in the shops. The shops, as units, as well as a network operate as independent "divisions", profit centres within the company.

The retail manager is rather dissatisfied due to the constant problems with serving customers, however, overall he has a critical personality. He considers it the biggest problem that *"he does nor receive adequate support from other areas", "results can only be achieved if all areas carry out their activities properly and it is not the retail branch that is blamed for everything".*

The retail sales activity is routine. If there is a new product development in the organization, then the result product often will be launched into the shops too. But

there are some development which develops products only for this market. These development processes usually are not controlled appropriately neither during the development phase nor after lauching the products. There is a stable dissatisfaction from the sales part with the production, which results in an approach: *"we will change if you change".*

5.6.2.3 Key account manager – individual level

He is one of the key persons of the commercial team, he maintains a good relationship with the manager of this area. He is in charge of customer relations of the central warehouse market, and he carries out all related main tasks such as submitting quotes, monitoring tenders, representing the company in the tenders, communication with customers, problem resolution, etc. He organizes the weekly product development meetings and he has an interest in obtaining as many new opportunities on the central warehouse market as possible. The commercial manager sees his role as the following: *"The main task of the company is to pass the ball to him and remove the obstacles; he is our striker".(Sales manager said about Key Account Manager)*

The central warehouse commerce has changed the most, regarding market opportunities, besides it is a quite new market in the company, while the company served the regional market and its own network of shops since decades. Customers put up tenders which in themselves mirror the shift in customer needs. The key account manager and the commercial manager attends several events, conferences that are organized by the customers and where these processes are usually reinforced.

However serving customers in this growing market created new solutions and opportuninies for the company, inside the organization that meant that they started to develop new products and samples which were evaluated on customer side by a professional team including usually a purchaser and a technologist. The key account manager shared their feed-backs regarding sample products but in production and at organizational level it rarely generated changes.

The product development innovation team is a team organization inside the company with representatives from each department. The key account manager is responsible for organizing meetings. These meeting are dealing much more with product

ingredients and not so much with manufacturing processes regarding the developed products.

5.6.2.4 Sales representatives - group level

Sales representatives work on the oldest market of the company, the regional market, and are primarily responsible for maintaining customer orders, announcing price lists, handling complaints, as well as generally keeping in touch with the customers. Each sales representative visits specific customers on a weekly/fortnightly basis, as well as they keep in contact with the customers on the telephone. Recommendations for new products rarely originate from them, however, they do add products that are successful on other markets into the current product portfolio. The customer base they are responsible for is rather diverse, firstly, the customers are great in number, secondly, they include regional shops of country-wide networks, points of sales for regional networks, individual customers, public institutions (hospitals, schools, nursery schools, care centres, etc.), catering units, hotels, etc.

Sales representatives get feed-back direct from the customers, primarily about service and products. During the research interval there was not any significant change in handling customers. They handle customer complaints on a daily basis and forward them to the production area. There was also no change initiated from the staff of this department regarding serving customers differently. Basically market opportunities dictated the needs of sales in the company; there was no focus on the reconsidering of this prior way thinking.

5. 6. 3. Production – group level

The production area employs a high number of staff, part of whom work on the production line, the other part is involved in managerial or specific professional activities. I am going to deal with the production manager and the technologist at the individual level, the shift supervisors and plant workers are going to be presented at group level.

There are several points of disagreement between the various levels of the production area, however, most of them agree that they are overloaded by commercial activities. They consider the number of orders to be excessive, customer needs to be likewise excessive and unpredictable, therefore, it is very challenging to plan ahead and work

efficiently. *"We need to ask for a new tranfering date at the customer because they called in so big amount of product that we did not have enough capacity to produce and transfer it until the deadline." (Production manager)*. They agree furthermore that the quality of labour has deteriorated greatly over recent years, it is increasingly difficult to recruit new staff, *"we almost have to drag people from the street to be able to maintain production" (Shift supervisor).*

The whole production works in an ad-hoc way. Workers try to learn production processes on-the-job, which change very hectic depending on the amounts of production. This takes time from analyzing the product portfolio regarding production efficiency, from making deductions based on experience and from learning. Of course there are some incremental changes but no radical ones. And this latter is becoming more and more difficult as the importance is on manufacturing more and more products.

5.6.3.1 Production manager (Plant 1) – individual level

The new production manager, who arrived at the company at the beginning the research, used to work as the CEO of a smaller manufacturing company, then following its liquidation, she started working for the company at the beginning of 2015. She has experience in food engineering, however, she lacks experience in this specific sector. Her position was subject to frequent changes in the company, at the beginning of 2015, she was the third person to hold this position within a year.

Her work concentrates on the main plant, partly due to her presence there. She created a well-functioning team in the plant that she defends in practically any situation, even if they were the ones who caused problems. As a consequence, her subordinates are not consistently accounted for, and in case of a problem she interferes personally. The technologist said about her: *"I did not have a production manager long ago who was such a good person"*

Since her arrival, she keeps falling back to the spiral of carrying out operative tasks in the plant instead of completing real managerial tasks. She takes all criticism and observations personally. Together with his biggest professional support, the technologist, she rejects any innovative ideas or constructive proposals.

5.6.3.2 Technologist (Plant 1) – individual level

Responsibilities of the technologist include developing new products and preparing product samples that derive from commercial needs, as well as the incremental development of existing activities. The latter is not carried out properly due to lack of time caused by the high number of product samples to be produced.

In production the technologist has high expertise, but he is not so good at transfering his knowledge and integrating it into the production processes. He does not believe in that it is possible with the present quality and amount of workforce to teach them. *„I show him how to do three times, but he does not do that way forth times. Then I show him again, but nothing changes. Do not wait for miracle with these people" (Technologist said about the on-the-job training processes in production)*

He is the biggest support of the production manager. He regards innovations and developments negatively. He is a great expert on production technology, however, he is not a manager type, and he tends to avoid conflicts. This constitutes an important handicap in the control of production technology. *"Usually when we present a sample product it is very beautiful after that the system collapses." (Key account manager from the product launch process)*

He is fond of his profession, nevertheless, he disagrees with priority based on meeting the expectations of the customers and the market, and therefore he constantly enters into conflict with the commercial department: *"I disagree with that we always submit to the customers".* Basically he is "a production line worker who has been promoted", and he can identify with the situation of the plant workers much better than with the principles and directions set by the management. It is determinant in his behavior what he did and how at his prior workplaces.

He often complains and tends to take advantage of his professional advantage, it is only the CEO who he cannot mislead regarding professional issues.

5.6.3.3 Shift supervisors (1. üzem) – csoport szint

Shift supervisors feel unduly appreciated in the company. During the shifts, they usually work reactively, they run to resolve problems if they arise, which happens constantly. They are not consistently asked to account for their tasks, however, in

case of a production problem, they are the ones who are expected to take the responsibility.

The shift supervisors have different levels of experience and knowledge. Some are very professional, and others less so. Some have worked at the company for many years and understand the manufacturing process better, and others are better at organizing and supervising shifts. They are generally slow to change routines and habits. Over time, an ad-hoc operational system had evolved because the speed and volume of customer orders did not allow operational planning, and because shift supervisors did not see the need for it, with one commenting: *"We have no time to be on the production line, there is so much administration, ad-hoc tasks and sudden problems."*

They have conflicts with the technologist. They did not attend organized trainings. The technologist and the production manager tried to teach and train them, but there was no long-term results of these trainings.

5.6.3.4 Plant workers (1. plant) – group level

The group is very diverse: some workers have been working there for 10-15 years and had received vocational education, some of them arrived a few years ago and lack professional background, furthermore, wage-workers continuously arrive who are practically dragged from the street to assist in the production for the day. This means that most of the new workers have not any experience in this field. The training of new workers is on-the-job. The management of the plant is happy when the workforce is "enough per capita", so there is no time and capacity to give a new worker a proper training, and in several cases *"it is not worth training new workers because until the end of the training he/she will not work at the company".*

Some production lines uses technology, and therefore the skills to operate these machines are more important there. Other lines still requires hand-working skills. Workers therefore have to develop new skills but there is no time for training because of the volume of work. Those responsible for providing training do not have enough time to do so.

Production struggles on a daily basis to manage the flow of new products and the tight deadlines on customer orders. There was not usually enough time to optimize the production of new products. The plant workers usually learn on-the-job, and it is not unusual to find that staff are seeing a new product for the first time during the completion of the first customer order. The technologists are involved, but the whole process could have been more organized and controlled.

Plant workers have a variety of different skills. Older workers tend to use old habits, which are often not very professional but simply how the work has been done in the past. Workers often do their tasks in different orders and using different processes, with different effectiveness and efficiency. The plant workers do not attend or wish to attend training. Shift supervisors defined the major problems: *"We have so few plant workers that we cannot let them go on vacation let alone training."*

Plant workers consider their work highly chaotic, they cannot plan their weeks or days, many times they do not even have a clear vision about what time they can finish work that day or whether they would have to work at the weekend. Fluctuation is high, and even the workers who have not quit yet are dissatisfied with the current conditions.

5.6.3.5 Plant 2 – group level

The second plant is 50 km from the main establishment. It uses less technology but the staff have better professional skills, with a loyal group of professional plant workers. They work as an isolated unit and do their work well, but with no significant changes. They had not been forced by either the external environment or the top manager to increase efficiency. The technological level of the plant only allows it to serve regional markets and the company's own shops. The size and the capacity of the plant is much smaller than the main plant, largely because of the technological underdevelopment.

5.6.3.6 Plant manager (Plant 2) – individual level

The manager of the second plant has been at the company for several years, unlike the manager of Plant 1 who had changed several times in 2014. The manager of Plant 2 during the study period was more qualified than the manager of Plant 1. She

managed the whole establishment alone, and also developed products for regional markets and company shops. She said: "*I like this separateness, that they let me work on my own"*

The two plants help each other when there are capacity problems, although the two managers tend to compete.

5. 6. 4. Engineering and maintenance – group level

The engineering and maintenance department contains a technical manager and maintenance workers. They are mostly middle-aged with some approaching pension age. This department is therefore not a young, innovative team, and tends to focus on maintenance work. Maintenance is usually carried out when there are problems with a machine, because the production line runs continuously. Preventive maintenance is unusual.

Staff in this department rely on routines, and do not tend to learn from experience, reacting to problems as they occur. Maintenance workers are not trained, and they do not record experience to store knowledge. The focus is on ad-hoc problem-solving.

The maintenance workers are in permanent conflict with plant workers because of the state of the machines. Plant workers typically made comments like:

"*They [the maintenance department] don't fix problems, their reaction time is very slow."*

A typical response from a maintenance worker was:

"*We have no time for maintenance work, there."*

Earlier technological development projects at the company were initiated by the top manager. These focused on developing manufacturing technology to improve competitiveness. The technical manager was also involved. The way of using technology, and how it was taught did not change, and it did not matter whether the workers were using new or old machines. The technical manager created usage and cleaning descriptions for each machine, but did not teach the workers how to use these nor control these processes among either maintenance or plant workers.

5. 6. 5. Procurement – group level

The procurement department consists of a purchasing manager, a warehouse manager and storekeepers. The purchasing manager communicates with raw material suppliers. The company obtained ideas from suppliers as well through their own innovations. These were forwarded to the top manager and the technologist by the purchasing manager. Several product development projects at the company had been started as a result of supplier comments. The top manager promoted good relationships with suppliers as a priority, alongside product development and experimentation.

The staff of the procurement department do not attend training regularly. Warehouse staff were trained in using stock management software, but this training only affected this department and did not have any significant effect on any others.

5. 6. 6. IT – individual level

The IT department consisted of a single person who had worked at the company for several years. He had developed the company's IT system, and both the system and his approach as system administrator were obsolete. The IT system was not integrated, which could lead to the company falling behind its competitors. The system administrator was not interested in developing himself or the system.

5. 6. 7. Other departments (accounting, finance, customer service) – group level

I characterized the other departments as a group because they did not generate much information towards my research. The customer service and the accounting departments use old routines, and had not been expected or required to change their ways of working or processes. They learnt when necessary, for example when the external legal environment forced changes to particular policies, but otherwise there had been no significant changes in these departments for several years. Some members occasionally attended professional training.

5. 7. Evaluation of the main tipping points in the company between 2015 and 2017

This section discusses the main tipping points in the company during the research period.

These are the following chronologically:

1. Radical downturn in financial performance and in earnings compared to previous years (the end of 2014–beginning of 2015)
2. Significant decline in the performance of company shops, and loss in particular shops (the end of 2015)
3. Lack of stock of certain products, making it impossible to serve certain customers and markets (August in 2016)
4. The owners accept the strategic direction and expect strategic implementation as soon as possible (the end of 2016)

There were several smaller tipping points during this interval, but these are not covered, for several reasons. First, the focus of my thesis is the relationship between the top management and the organization. Second, the length of the thesis does not allow me to explore changes that affected just one part of the organization. I have therefore chosen to focus only on the main tipping points and their cause-and-effect dimensions.

I will discuss each event by looking at several aspects:

1. The perceived problem and its direct effects on the behavior of the top manager;
2. The antecedents of the problem, and previous drivers of change;
3. The evaluation of the top manager's behavioral and cognitive changes; and
4. The evaluation of the learning process at organizational level.

5. 7. 1. Radical downturn in financial performance and in earnings compared to previous years (the end of 2014–beginning of 2015)

My research started in early 2015, but events in that year were strongly affected by those in the previous year. It is therefore helpful to briefly explain the situation.

The perceived problem and its direct effects on the behavior of the top manager

The top management faced two problems in 2014. The first was to produce and commercially list a new product. The aim was to develop a product that was competitive and could be sold in large amounts for the central warehouse market. Based on the expected sales volumes, the company estimated likely profits of around 64 000 EUR from this one product. Unfortunately, the product resulted in a huge loss. After the long listing process, the sales team was suddenly expected to delist the product, because customers did not accept the need to increase its price. This was a big loss for the company. The second problem, which was related, was that this failure meant that the company, which had previously been successful with acceptable financial results, was in the red at the end of 2014. The commercial manager said:

"I worked on the listing of this product for a year, it became a successful product just like one of our competitor's main products, we sold 651 000 items in the first month. We got an early cost calculation, and listed the product on that basis, but later calculations showed much higher costs. So we lost 60-something thousand euros over two months. We needed to withdraw the products, and the customers were not happy at all, of course. Well, nor me … I said that if we failed, my work was finished there (laughing). That was such a volume of income that we could not fill it with other markets or products."

After the market failure and financial loss, the top manager decided to reorganize the company. It needed a more appropriate system for cost calculations before and during production, and costs also needed to be lower, with more efficient operations to avoid other similar failures in future. The production manager was fired and the CEO was looking for a new production manager to manage Plant 1.

The antecedents of the problem and previous drivers of change

The organizational and operational problems did not begin with the new product. Several managers at the company had previously defined development ideas, and proposed new ways to develop the company's processes and organization. In 2014, the company had three different production managers. The one who left the company at the beginning of 2015 commented:

"The last months felt like we were seen as dilettantes and idiots, and the sales department was special. The gulf between these two departments is so big that it makes the Grand Canyon look like a gutter."

The arrival of each production manager was like "waiting for a messiah" *(Technical manager),* who would solve problems that the company had been unable to solve for several years. This meant that the company looked for new production managers, but the system as a whole and the assumptions behind it did not change. As the technical manager said, "*If something did not work well in production, the management waited for the production manager to work a miracle. He was employed to be a wonder-worker. The messiah."*

The evaluation of the top manager's behavioural and cognitive changes

The company's failures resulted in a changed attitude among top managers. The CEO realized that there were problems across the whole company, and not just in the production department. He therefore started several projects in early 2015 to rethink the organizational structure and operations, and revise job descriptions.

The CEO therefore showed cognitive change, but his behavior did not changed. He continued to control his colleagues, without reference to the new job descriptions. The effects of this were mostly seen in the second half of 2015.

Evaluation of the organizational learning process

The financial loss in 2014 was a concern for the employees and encouraged them to be positive about the internal change projects. The results were new job descriptions and a revised responsibility and authority system. At a process level there was no radical, systematic change, although there were minor changes in particular areas. For example on one line in Plant 1, where the new product was produced, the company saw major improvements in efficiency in the second half of 2015.

As a result of the projects, several inefficient routines were found that had been embedded in the organization for a long time. They had either not been perceived as a problem by the heads of departments and the CEO, or there had been no appetite to solve them. The top manager defined at a cognitive level that these needed to be changed, but in everyday work, at a process level, there were no serious changes or

radical development. The top management instead focused on other things such as product development. The problems in production and customer complaints did not cease, suggesting that there was no double-loop learning.

5. 7. 2. Significant decline in the performance of company shops, and loss in particular shops (the end of 2015)

The perceived problem and its direct effects on the behaviour of the top manager

The primary focus of company attention during 2015 was the production organization and processes. The company started to generate profits in the second half of the year and was managing other problems day-to-day, and this resulted in a sense of relief throughout the organization. At the end of the year, the sales activity of the company's network of shop became an issue, because this division started to generate a loss. The number of customers decreased, and the network as a whole performed poorly although some individual shops continued to perform well. The company realized this at the end of 2015. The first reaction of the top manager was that this was a problem for the commercial department.

The antecedents of the problem and previous drivers of change

This problem was unexpected, not least for the CEO, because the internal change projects had not identified any major problems in this department. The real problem was that the shops were not well served: they got poor quality products or the quantities were not as ordered. The company had taken the view that their own shops were internal customers, and so service could be poorer, but it was clear that the market did not appreciate this:

"Competition is more and more serious, our own shops compete with retail chains, unfortunately with worse quality and higher prices." (Retail manager)

The shop and retail managers had tried to raise this situation during meetings or in daily feedback, but the production team and top management did not take it seriously. The problems with the company's shops were managed only through daily problem-solving activities, until there was a clear financial loss. The question of competitiveness was not dealt with at strategic level.

The evaluation of the top manager's behavioral and cognitive changes

The top manager started by handling the whole shop network issue as a problem for the sales department. He saw the earlier situation as not very serious, and felt the shop network needed to be developed at a sales level so did not want to remove responsibility from the sales department.

The first plant became over-burdened and developed more product-quality problems, which in turn were passed on to the shop network. The product quality in the second plant was also an issue, but the volume was lower. The top management started an evaluation process, partly as a result of pressure from the company's owners. This involved analysis of the performance of the shops and closer monitoring of the whole product and customer portfolio from the beginning of 2016.

The CEO did not show either behavioral or cognitive change. He started the analysis processes only as a result of pressure from the owners and to overcome the financial loss. He thought about products, markets and customers in the same way as before. His behavior also did not change towards the shop network: he continued to expect the sales department to solve the problems of the shop network.

Evaluation of the organizational learning process

At organizational level, there was no learning. The problem was not seen as especially serious, and there was no significant change in the thinking and processes of the company. The company's 20 shops provided only a tiny proportion of the central warehouse's customer orders. Processes in production and sales continued to follow the same routines. Service and product quality problems occurred frequently, and so not only had the system not changed, but the conflicts between the retail manger and production department and between the retail manager and the CEO became even deeper. The retail manager and the shop managers felt the top managers were not dealing with their problems: "*We are waiting for the solution, but the production department is not helping us*."

The previous bad habits and conflicts therefore became more intense.

5. 7. 3. Lack of stock of certain products, making it impossible to serve certain customers and markets (August in 2016)

The perceived problem and its direct effects on the behaviour of the top manager

This analysis focuses on those milestones that made the company think about what was happening. In this case, the company and the top management suddenly realized that something was wrong and needed addressing. In August 2016, the first plant reached capacity. One customer ordered a record amount of a particular product and there was no capacity to produce other products on the same certain production line. This significantly affected regional markets and the company's own shops. The plant ran out of stock in this and other products, and had no plan to manage this, which made the problem worse. The problem was only perceived when the company was not able to supply its customers.

The top management instantly moved the manufacturing of scarce products to the other plant. For products that could not be produced in the other plant, the top management requested prices from other suppliers for temporary production. This was a change, as these decisions had previously been out of the question for the company.

The antecedents of the problem and previous drivers of change

The lack of capacity and temporary scarcity of some products had previously been quite common for the company. It is therefore understandable that managers did not prioritize this as a problem. These were conditions that the company had learnt to live with. Interventions were managed daily and directed at averting major problems, for example, to compensate customers, and not to change the system as a whole. This was not a priority for either the production manager, or the top manager.

The analysis process that started in 2016 did not come up with the idea to move products or product lines from one plant to another or to expand capacity temporarily via external suppliers. When suggestions like this were made, they were quickly discarded. Everything was underwritten by the view that: "*The cheapest and most efficient is what we produce in our first plant, every other solution means more costs"(CEO)*

The evaluation of the top manager's behavioral and cognitive changes

This milestone was the first moment when the top management accepted that the company needed radical change, primarily as a way to fix things quickly. The cognitive change was the result of recognizing that the company had no other choice if it did not want to lose customers and markets. However, if the company had addressed the situation earlier, it might not have become impossible to serve certain markets for weeks because of the dominance of the central warehouse orders.

This problem was also notable because the top management reduced product development and the number of new product implementations in the first plant. The CEO therefore took action to allow the plant's processes to normalize. As well as cognitive change, the early signs of behavioral change were therefore also observable.

Evaluation of the organizational learning process

The top manager's cognitive and behavioral change was not observable at organizational level, where 'fire-fighting' activity continued. The reduction in product development made clear that it was a myth that the company could continue to provide everything. It became more and more acceptable to let products go to reduce complexity and increase the margin on the remaining products. This shift in thinking was characteristic primarily of the sales department, the commercial manager, the regional representatives and the key account manager. This was not a positive shift, but more an acceptance and resignation. These managers were skeptical that the plant with its current workforce would be able to improve performance even with fewer products and lower complexity.

5. 7. 4. The owners accept the strategic direction and expect strategic implementation as soon as possible (the end of 2016)

The perceived phenomenon and its direct effects on the behaviour of the top manager

In the last milestone, the change was generated by external validation from the owners, rather than recognition of a problem. The owners accepted the strategy and at the same time made clear that they expected it to drive operations. The central

warehouse market was the focus of the strategy. This strengthened the CEO's view that a change in thinking and behavior was needed.

The CEO's thinking clearly showed a change, but this was only just starting to be shown in his behavior until 2017. During that year, the top manager started to embrace the strategic directions that had already been agreed.

The antecedents of the phenomenon and previous drivers of change

2016 was a year of analysis of product and customer portfolios. Until August that year, there was no change in the company's general thinking about products and customers. Despite the lack of manufacturing capacity, the focus was on gaining new customers, delivering new tenders and continuous product development. After August, there was less drive in the direction of production from the sales department and the CEO, but this was not yet strategic.

The evaluation of the top manager's behavioral and cognitive changes

The CEO had previously preferred developing new products to making incremental improvements of existing ones. This kind of activity had become routine over several years. It was therefore a serious change when he was able to accept that the company needed something else. After the owners had reinforced this, his cognitive change became constant. From the beginning of 2017, he also tried to change his behavior, with the strategic implementation of the new approach. He only allowed product developments that were consistent with the strategy. During performance evaluations, he tried to evaluate against the company's strategic direction: for example, letting a customer go was not necessarily seen as a loss. This can be defined as double-loop learning. After setting out the new strategy and with the owners' reinforcement, this deepened and the new thinking and behavior became routine.

Evaluation of the organizational learning process

The organization, particularly the production department, did not copy the CEO's learning and change process quite as quickly. The employees identified the cognitive change but were skeptical about whether it would last, or whether the CEO would revert to the old routine. Both the sales and production departments were afraid that

the change would not last, and asked each other: "*Do you think there will still be a change in the future?"(Key account manager)*

Over several months, it became clear that the CEO was committed to the strategy and more and more employees followed his lead about the company's product and customer portfolios. It became more and more routine to let products and customers go and exploit company capacities in a more efficient and effective way.

5. 7. 5. The relationship between the top manager's cognitive and behavioral changes and organizational learning

Analyzing these four tipping points shows that the destabilizing changes did not happen suddenly. They were only identified when they reached a crisis, but each one had antecedents and signs that could have been recognized earlier. In each case, however, the top manager either did not deal with those problems at all, or did not manage them properly.

By exploring the antecedents of each situation, it was clear that the company learnt to live with these signs, and manage them rather than resolving them. Difficulties—such as limited capacity in production, the company's own shops not getting good-quality products, or production being managed by hand—therefore become conventional, natural, and accepted and the organization took them for granted. There was only single-loop learning at organizational level, creating and strengthening poor quality routines.

The reaction of the top manager is an important 'control system' for identifying problems at lower levels in the organization. If the thinking of the manager does not change about a situation, problem and solution, the organization will not change either. It is also clear from the analysis, however, that cognitive change from the top manager is not enough. Behavioral change is needed as well. If it lasts long enough, this cognitive and behavioral change can induce organization-level double-loop learning. The organization will copy the learning of the top manager but needs continuous reinforcement that the top manager will not revert to earlier behavior and thinking.

These conclusions demonstrate that the top manager has a significant role in driving the organization. Top managers will not be able to change the whole system without their own double-loop learning process. If this does not happen, there will be no change at organizational level or the organization will revert to its earlier state, following old routines.

6. ANALYSIS OF ORGANIZATIONAL LEARNING AND ADAPTATION BETWEEN 2015 AND 2017

In the following section, I separately evaluate each level of the company, the individual, group and organizational levels along the Variation-Selection-Retention dimension of the adaptation process, for three different time period. These three periods are separated based on the previous analysis along the top management's idea about the strategy and its behavioral change. These time periods are the followings:

1. year 2015 and first half of 2016
2. second half of 2016
3. first half of 2017

During the evaluation of the different organizational units and individuals, in case there was relatively homogeneous behavior and reasoning, I did not take each employee into account, or in several cases, I applied group analysis instead. I believe that this restriction helps to focus the analysis and the understanding of the main conclusions. It is also important to clarify that those units, which did not show significant change after the first period, were not analyzed in every period. I focused on the main establishment, since this unit showed the most radical change.

6. 1. 2015 and first half of 2016

2015 and the first half of 2016 shows very similar pattern in terms of adaptation process at organizational level, therefore this period is regarded as the first interval of the analysis.

6. 1. 1. CEO – Top manager

The top manager's variation activities were mostly focused on product development, where the top manager took an intensive role, mostly in the development of new products. During the product development meetings – which were mostly held once a week - he strongly suggested the testing of the new products, the production of different variations, and he believed that it is important to apply to all tenders possible, because it is a learning opportunity for the organization. Selection was not

typical in this activity, because he supported, approved all product development initiatives. This meant even 10 sample products per week. Looking at retention, he willingly managed activities, which were important to him, and all other activities or decisions were delegated to the level below. Generally stated, looking at his mentality and behavior, such as commuting to work, communicating to colleagues, or calling them to account, he was driven by old routines.

6. 1. 2. Commercial department

In the Commercial/sales department, most of the sales colleagues drew up development suggestions, primarily product development suggestion per customer category. Sales was characterized by this factor at a group level. The Key Account Manager was channeling the tenders of key accounts, which brought important information to mostly the innovation and product development team. Besides this activity, inspired by the tenders, he raised the idea to sell to new customers as well. The Key Account Manager was not taking part in the selection activity. Problem solving and information mediation characterized his daily work: problems mostly reported by customers were forwarded to production. Apart from making bids for tenders, his work was restricted to these activities. The attitude of the top management re-enforced his belief in new products, therefore he kept bringing new product ideas and calls for proposal.

The Retail Manager's variation activity was also represented by new product development ideas for his market. He neither participated in the company's selection process. In terms of products and stores, selection on the specialty store market was carried out by the market itself. He has the same characteristics as the previously mentioned colleagues. His actions were limited to daily problem solving and weekly product procurement activities.

The mechanisms amongst Sales Representatives showed the same phenomenon at regional sales level. Old routines regarding thinking about customers and behavior were not challenged. Previous viewpoints prevailed. If there was a need for new product development for a public procurement, the process was initiated. There was no selection in terms of customers; all new customers were positively regarded – irrespective of the cost implication of the given services.

The Commercial Manager's – the leader of this group – variation activity slightly differed from the others'. Though he also formulated product development proposals, but he mainly focused on other market opportunities, such as strategic alliances, which were mostly stuck on the level of thought. He also suggested improvement areas for the operation of the organization, which might derive from his additional operative management responsibilities. His selection activity is rather interesting, because he had already formed thoughts and improvement points about a more efficient operation of the organization. However most of these ideas remained ideas and did not reach selection stage, because he did not feel the necessary support from production and top management. His activities in the retention dimension did not change, but it is important to note that he had ideas, which were not formed by anybody else.

6. 1. 3. Production – Plant 1

Development ideas were very rarely and periodically formed by the production department. This unit did not induce any organizational variant. Strategic selection does not happen, intervention processes only work on a daily operative level. If there is enough time, the task is carried out, if there is no sufficient time, the task then is disregarded. Therefore selection process is somewhat not managed. A "manually controlled" plant is the result, which does not dare to contradict sales department, is not prepared or cannot get prepared for problematic situations, and it only reacts after such event occurs.

If we examine this at an individual or sub-group level, there is rarely any improvement idea coming from the Production Manager regarding sales department or lower organizational levels. Together with Shift Supervisors and Technologist, he only intervenes to the production sequence and tries to optimize available resources on a daily basis. Selection is not controlled; daily capacity decides what is eventually realized and what is ignored. Due to the scantiness of production capacity, the increased demand and the significant degradation of the production and human resources, activities increasingly become operative; the need for intervention is beginning to stay, which can even reach a point when the Production Manager works at the production line. She does not dare to hold her colleagues responsible, because

she is afraid that they might leave; therefore her relationship to lower levels does not leave space for real management control.

Technologist has very little independent initiatives, which reach other units. He typically makes suggestions regarding production-organization when there is pressure from higher levels, but information mostly needs to be pulled out of him. His recommendations are less structured, mostly can be categorized as daily problem solving ideas. There is no sign of independent initiative; he only prepares sample products as determined by the innovation team. If Production Manager asks for his opinion, he formulates his view on daily matters, but there is no selection, he does not get involved. His schedule is a serious bottleneck; only those samples are prepared, which he has time and focus for, but there are samples, which are simply not created. He also has tasks, which are not carried out at all, because he does not have time for them.

He follows instructions; and because of previous grievances, he is not willing to share his own ideas and thoughts. He keeps some tasks for himself, while he does not perform tasks, which considered a priority for the company, such as technology development, employee trainings, train employees to produce new products, because he says he does not have time nor energy.

I do not evaluate shift supervisors individually, because from analysis perspective, they can be regarded as a homogeneous group. They do not present any individual initiatives, which might have positive effect. They rather complain on a daily basis, which is represented by dissatisfaction. They might have good ideas in mostly incremental, daily decision making situations, but these are not systematic moments. Their decision making about production plans, processes, or serving new or existing products is driven by old routines. Decision making mechanisms are based on old routines; daily production demand and bottlenecks (capacity of production lines and employees) determine what stays and what goes, which product is produced and which one is excluded, which customer is served fully or which one is not served. Generally speaking, the system is characterized by chaos and constraint of daily intervention, and the labor force is of poor quality, disorganized and does not pay sufficient attention to hygiene. They demonstrate resistance towards upper management and any kind of change, paired with dissatisfaction.

Production workers are also analyzed on a group level. Variation is demonstrated along individual interests: looking for loopholes, theft, malingering, and smoking. These happen along individual interests and have a negative impact on the organization.

Without control and consequences, loopholes are found. They follow the usual production practice every day. Somebody who has been working there for years makes decision about production sequence and technology processes based on habits from previous months, years. This has to be carried out by a labor force of deteriorating quality.

6. 1. 4. Procurement

In case of procurement, variation means channeling new product ideas of suppliers to production, the technologist and upper management. The Purchaser's selection activity is solely to make decision based on price, which has already become a routine. He has a set of partners, which he usually purchases from. He focuses on keeping the costs at a low level and this is the driving and organizing factor in purchasing and warehousing.

6. 1. 5. Engineering and Maintenance

There is basically no variation activity at the engineering-maintenance department. They introduce ad-hoc problem solving elements, which are not systemized and nor planned. Their selection mechanism is characterized by their own capacity, time and the available maintenance time. If they have enough time because a machine is stopped, there is a higher chance of maintenance to happen. If this is not the case, some tasks remain undone. This results in stabilized behavior and processes, when there is mostly post-interventions. Mostly those machines are fixed, which are either reported or already broken.

6. 1. 6. Supporting functions

The company has a self-developed and obsolete IT system. It is not integrated and extremely outdated. There have not been any changes in this department; there was a need for new reporting function, but there was no need for major system modification. The IT Specialist insists to keep the current system, but he does not

have any development ideas. His activities are limited to system operation and software and hardware maintenance.

Accounting has no variation activity; selection in the finance department is carried out along the availability of resources. They work by old routines, reports and statements are done in the previous systems.

6. 1. 7. Organizational level

At organizational level, there is a strong variation activity due to the processes and activities represented by the top management, such as new product development. However it is not controlled nor managed. This is an emphasized activity for the members of the organization, because they are aware that it is in the top management's focus. The organization basically does not select; it is decided on a daily basis whether there is enough capacity for something or not. An evolutive selection process comes is born, there is no priority set for the customers, nor products, or these priorities have already been previously set and they do not diverge from these old conditionings, regardless of what the market demands.

These conditioned mindset and behavior, the organizational history of each market and customer determine the everyday life. These conditioned routines affected the mindset and processes. It was generally evident that production-planning and customer services were driven by decision-making solutions, which had been previously proven competitive on the oldest or regional market. These are the followings, among others: "*to produce a product at a relatively low cost, which is customized to the market needs, with some product development activities, in small batches and fast reaction time from customer's perspective*". Own stores are served at last, because they are easy to serve, they are closer and as part of the company, they are less concerned with problems.

There is a gap between production and sales, which did not change in the given year, moreover it gets worse in 2016. The organization is slightly more transparent compared to previous years, but there is no evidence of any radical improvement.

Table 17 summarizes the evaluation of organizational players and levels along the variaton-selection-retention dimensions.

Table 17: Evaluation of organizational players and units of the company along the adaptation process in 2015 and the first half of 2016

Level of analysis	2015 and the first half of 2016		
	VARIATION	SELECTION	RETENTION
CEO/Top manager-individual level	Intense role in product development activities, primarily in new prodcut development.	Approving and supporting all product development ideas without selection.	He willingly manages activities, which were important to him, and all other activities or decisions are delegated to the level below.
Commercial department – group level	Collegues of this department formulate development, primarily product development initiatives for each customer categories and markets.	This process is basicly managed by the external environment the process of customer choice and order.	Very little focus on the deep analysis of incomes and drawing consequences.
Commercial manager – individual level	He suggests improvement areas for the operation of the organization. Besides he mainly focuses on other market opportunities, such as strategic alliances. He supports product development partially.	He has already formed thoughts about the need for selection. However most of these ideas remained ideas and did not reach selection stage.	His activities in the retention dimension did not change, but it is important to note that he had ideas, which were not formed by anybody else.
Key Account Manager – individual level	Channeling the tenders of key accounts, which brought important information to mostly the innovation and product development team. Besides this activity, inspired by the tenders, he raised the idea to sell to new customers as well.	No selection activity	Problem solving and information mediation: problems mostly reported by customers are forwarded to production
Retail manager – individual level	New product development ideas for his market	No selection activity	Problem solving and information mediation: problems mostly reported by customers are forwarded to production
Sales representatives -individual/ group level	New product development ideas for their market	No selection activity	Problem solving and information mediation: problems mostly reported by customers are forwarded to production
Production – group level	Development ideas, initiatives are very rarely and periodically formed.	Strategic selection does not happen, intervention processes only work on a daily operative level.	A "manually controlled" plant is the result, which does not dare to contradict sales department, is not prepared for problematic situations, and it only reacts after such event occurs.

Production manager/ Plant manager – individual level	There is rarely any improvement idea coming from her.	She only intervenes to the production sequence and tries to optimize available resources on a daily basis with shift supervisors and the thechnologist. Selection is not controlled; daily capacity decides what is eventually realized and what is ignored.	Her activities increasingly become operative; the need for intervention is beginning to stay, which can even reach a point when the Production Manager works at the production line.
Technologist – individual level	There is no sign of independent initiative; he only prepares sample products as determined by the innovation team.	If Production Manager asks for his opinion, he formulates his view on daily matters His schedule is a serious bottleneck; only those samples are prepared, which he has time and focus for.	He follows instructions; and because of previous grievances, he is not willing to share his own ideas and thoughts. He keeps some tasks for himself, while he does not perform tasks, which considered a priority for the company, because he says he does not have time nor energy.
Shift supervisors - individual/ group level	They do not present any individual initiatives, which might have positive effect. They rather complain on a daily basis, which is represented by dissatisfaction. They might have good ideas in mostly incremental, daily decision making situations, but these are not systematic moments.	Decision making mechanisms are based on old routines; daily production demand and bottlenecks (capacity of production lines and employees) determine what stays and what goes, which product is produced and which one is excluded, which customer is served fully or which one is not served.	Chaos and constraint of daily intervention.
Plant workers – group level	Individual interests: looking for loopholes, theft, malingering, and smoking	Without control and consequences, loopholes are found.	Production sequence and technology processes based on habits from previous months, years. This has to be carried out by a labor force of deteriorating quality.
Procurement - individual/ group level	Channeling new product ideas of suppliers to production, the technologist and upper management.	Selection activity is solely to make decision based on price.	He focuses on keeping the costs at a low level and this is the driving and organizing factor in purchasing and warehousing
Engineering, maintenance – individual/ group level	No variation activity	No selection activity	Mostly post-interventions. Mostly those machines are fixed, which are either reported or already broken.

Accounting – group level	No variation activity	Selection in the finance department is carried out along the availability of resources	They work by old routines, reports and statements are done in the previous systems.
IT – individual level	No variation activity	No selection activity	Insistsing to keep the current system, but he does not have any development ideas. His activities are limited to system operation and software and hardware maintenance.
Organizational level	Strong variation activity due to the processes and activities represented by the top management, such as new product development. However it is not controlled or managed.	The organization basically does not select; it is decided on a daily basis whether there is enough capacity for something or not. An evolutive selection process comes is born, there is no priority set for the customers, nor products.	The organizational history of each market and customer determine the everyday life. Own stores are served at last. There is a gap between production and sales. The organization is slightly more transparent compared to previous years, but there is no evidence of any radical improvement.

6. 2. Second half of 2016

After 2015, in 2016 – mostly due to ownership and external pressure – the company started to run strategic analysis; which also involved the revision of previously existing customers and product portfolio. On one hand the analysis was extremely complicated and time-consuming, on the other hand, the company "*did not take this analysis seriously*" until the production capacity could not keep up with customers' demands. The turning point was in the second half of 2016, therefore for analysis perspective; this period needs to be separated from the previous one.

6. 2. 1. CEO - Top manager

Intensive product development marked the beginning of 2016, but in the second half of the year, a more low-key product development was observed, but just like in previous periods, with the top management's commitment. First sprouts of selection were observed in the second half of the year, when the top manager was able to let go of 1-2 products in order to ease the load of production and colleagues, whose capacities were limited. In terms of retention, he managed tasks which had been

previously marked as important, and other tasks were delegated to lower levels. Thus there was no remarkable change in his everyday behavior comparted to previous period.

6. 2. 2. Commercial department

There is less product idea coming from sales department. In the second half of 2016, there was a more radical reorganization between two facilities – mostly as a fire-fighting reaction – and the Commercial Manager, who was maybe the most open minded about portfolio limitations from the beginning, was also hard to convince to deal with this issue. Selection was not part of real processes, but on the level of ideas, an analysis of the customers and products was initiated, based on turnover, coverage and customer habits. Sales operates the same way as before, although their product development activities are slightly suppressed.

The Commercial Manager already suggested some process improvement ideas during analysis phase, but he mostly participated in the selection process. As far as everyday activities are concerned, he follows old routines regarding retention; he expresses the problems, but he does not deal with solutions, or at least not in every case.

The Key Account Manager's variation activity slightly falls back, fewer cases are channeled into tenders, but basically there is no evident change in selection and retention.

In case of the Retail Manager, it was observed that the foreign product portfolio was extuberated in the own shops – which was due to continuous problems in the previous period, and he continued to raise new product development ideas. Selection is furthermore carried out by the customers of this market, and those items, which were only sold in small amount, were de-listed.

The role of Sales Representatives did not change radically compared to previous period; due to managerial pressure, they took on a more serious role in the revision of customer and assortment.

Overall there was no radical change in the attitude and activities of the sales department. They do sense that channeling less new products and items become a

priority as a result of the customer and portfolio revision. Some colleagues take better part of the analysis process, which is not considered as selection, but the establishing analytical and evaluation work. Since real selection has not actually happened, their activities have not changed at the level of routines.

6. 2. 3. Production – Plant 1

Manual control continues to characterize production. They participate in laying the foundation for selection and in the analytical process, they make decisions about consolidating certain technological procedures, and transfers between production lines and facilities, possibly even take out a certain product.

Production Manager does not have time for variation activity. She is not able to constructively contribute to the selection process either, she cannot confer professionally. This is rather the expertise of the Technologist. The Technologist has a deep professional knowledge in this field, and also he has an overall understanding of the production. He participates in the evaluation process, but he is hard to convince to make decisions or even make recommendations, because he believes it would not bring any radical change in the life of the company; and nonetheless he is short of speech. He has less and less individually expressed opinion because of his historical detriments and “problems are just swept under the rug”.

Although he does have an opinion about what to produce and what to leave out, he keeps these ideas for himself because he believes that eventually it always boils down to “*what Sales wants*”. Furthermore, it is evident that since there has not been any major change on higher levels (production management, technology), shift supervisors and workers keep their old routines and attitude.

6. 2. 4. Other departments (Procurement, Engineering, IT, Accounting, Customer Service)

There have not been any changes regarding other departments, which either came from top management or by the department itself, therefore they keep on working according to old routines; they are not characterized by selection or variation. There

was no evident change during the inspection period either; therefore I do not analyze them further.

6. 2. 5. Organizational level

Variation activity decreased on organizational level in the second half of 2016. It decreased mostly regarding new products and samples, but the organizational detaches itself from these ideas with difficulty. It is evident that variation activity of previous era became a routine. Selection has not actually happened, but a more conscious, from-top-to-bottom analytical process has started. There has not been any materialized result yet, selection is still driven by the market, customers and capacity.

The organization still works along their routines. It faces the fact that real change does not happen. On one hand, the attitude of top management and sales remains the same regarding product development and customer services. On the other hand production says that sales only raise the problems. Sales however do not see any improvement in terms of production processes. These mechanisms result in a bad atmosphere between departments, where everybody complains and gets in heated discussions about a given problem.

Table 18 summarizes the evaluation of organizational players and levels along the variaton-selection-retention dimensions.

Table 18: Evaluation of organizational players and units of the company along the adaptation process in second half of 2016

Level of analysis	Second half of 2016		
	VARIATION	SELECTION	RETENTION
CEO/Top manager- individual level	Intensive product development marked the beginning of 2016, but in the second half of the year, a more low-key product development was observed.	Selection is observed in the second half of the year in product development. No selection among customers and markets.	He willingly manages activities, which were important to him, and all other activities or decisions are delegated to the level below.
Commercial department – group level	Less product idea coming from sales department. There was a more radical reorganization between two facilities – mostly as a fire-fighting reaction.	An analysis of the customers and products is initiated, based on turnover, coverage and customer habits. It is not a real selection activity yet. Selection is done by external environment.	Very little focus on the deep analysis of incomes and drawing consequences.
Commercial manager – individual level	Continuos problem definition regarding operational problems, without implementation. Thoughts about new market opportunities regarding customers, strategic alliances.	Significant role is the customer and product analysis process.	His activities in the retention dimension did not change, but it is important to note that he had ideas, which were not formed by anybody else.
Key Account Manager – individual level	Channeling most of the tenders of key accounts. The channels less tenders because of the growing problems in production.	No selection activity	Problem solving and information mediation: problems mostly reported by customers are forwarded to production
Retail manager – individual level	Foreign product portfolio was extuberated in the shops. Less initiatives for product development.	Basicly customers select. Product with little amount are becoming delisted.	Problem solving and information mediation: problems mostly reported by customers are forwarded to production
Sales representatives -individual/ group level	They have also less ideas about new products, because the amount of development declines at organizational level.	Participation is evaluating the product portfolio.	Problem solving and information mediation: problems mostly reported by customers are forwarded to production

Production – group level	Development ideas, initiatives are very rarely and periodically formed	Participation in the evaluation process which results in consolidation certain technological procedures and products.	A "manually controlled" plant is the result, which does not dare to contradict sales department, is not prepared for problematic situations, and it only reacts after such event occurs.
Production manager/ Plant manager – individual level	No time for variation activity besides the daily presence and operative tasks in production.	She only intervenes to the production sequence and tries to optimize available resources on a daily basis with shift supervisors and the thechnologist. She participates in the evaluation process but she cannot confer professionally.	Her activities increasingly become operative; the need for intervention is beginning to stay, which can even reach a point when the Production Manager works at the production line.
Technologist – individual level	There is no sign of independent initiative; he only prepares sample products as determined by the innovation team.	He participates in the evaluation process, but he is hard to convince to make decisions or even make recommendations.	He follows instructions; and because of previous grievances, he is not willing to share his own ideas and thoughts. He keeps some tasks for himself, while he does not perform tasks, which considered a priority for the company, because he says he does not have time nor energy.
Shift supervisors - individual/ group level	They do not present any individual initiatives, which might have positive effect. They rather complain on a daily basis, which is represented by dissatisfaction. They might have good ideas in mostly incremental, daily decision making situations, but these are not systematic moments.	Decision making mechanisms are based on old routines; daily production demand and bottlenecks (capacity of production lines and employees) determine what stays and what goes, which product is produced and which one is excluded, which customer is served fully or which one is not served.	Chaos and constraint of daily intervention.
Plant workers – group level	Individual interests: looking for loopholes, theft, malingering, and smoking	Without control and consequences, loopholes are found.	Production sequence and technology processes based on habits from previous months, years. This has to be carried out by a labor force of deteriorating quality.
Procurement - individual/ group level	Channeling new product ideas of suppliers to production, the technologist and upper management.	Selection activity is solely to make decision based on price.	He focuses on keeping the costs at a low level and this is the driving and organizing factor in purchasing and warehousing

Engineering, maintenance – individual/ group level	No variation activity	No selection activity	Mostly post-interventions. Mostly those machines are fixed, which are either reported or already broken.
Accounting – group level	No variation activity	Selection in the finance department is carried out along the availability of resources	They work by old routines, reports and statements are done in the previous systems.
IT – individual level	No variation activity	No selection activity	Insistsing to keep the current system, but he does not have any development ideas. His activities are limited to system operation and software and hardware maintenance.
Organizational level	Variation activity decreased on organizational level mostly regarding new products and samples but the organizational detaches itself from these ideas with difficulty.	Selection has not actually happened, but a more conscious, from-top-to-bottom analytical process has started. There has not been any materialized result yet, selection is still driven by the market, customers and capacity.	The organizational history of each market and customer determine the everyday life. Own stores are served at last. There is a gap between production and sales. The organization is slightly more transparent compared to previous years, but there is no evidence of any radical improvement.

6. 3. First half of 2017

The strategy is finalized by the beginning of 2017. It was mainly done by the top manager and the sales manager, and partially the key account manager regarding the central warehouse market questions. The analysis – just as before – is introduced by organizational levels.

6. 3. 1. CEO – Top manager

Variation activity is decreased to a minimum by the Top Manager; he mainly manages those product developments, which are in line with the strategy. Setting priority is part of the strategy; therefore he sets priority for certain products and customers. As a result, a new behavior and attitude is rising. He becomes more legitimate as a leader, but he still reaches back to his old methods. He seeks ways to acquire new ones, or at least partially diminish old ones.

6. 3. 2. Commercial department

Variation activity decreased within the commercial department, since according to the new strategy, it is the time of re-building and moderation. It is more and more accepted by Sales – in terms of selection – that they can let go of customers, markets, products and activities. They accept the notion of being smaller, and they have started to wait and be patient with production. Of course there is a slight skepticism, since problems are still in existence.

The Commercial Manager is the 'father' of the strategy; therefore he is committed in every way. His variation activity is evident in his improvement recommendations, while his selection activity is apparent in strategy development. His retention is characterized by skepticism about the attitude of top management and production, but he gives them the benefit of doubt.

The Key Account Manager only deals with tenders, which are either a part of or in line with the strategy; he is more and more opened to let go of certain products and his attitude is also changing about production processes and understanding how capacity works.

The Retail Manager – as a variation activity - insists on having a more serious reputation of the own shops, and to produce higher quality products for these channels. Selection process needs to go by him to ensure the decreasing number of product variants amongst foreign and own products. These mechanisms set foot during this period. On retention side, he is characterized by continuous dissatisfaction and raising problems.

Sales force reduced the product variants to seasonal products, and they started a continuous analysis of customers and products. As a result, in 2017 they let go of some customers with high needs and requirements for extra service activities.

6. 3. 3. Production – Plant 1

In production, process improvement recommendations are still a result of management pressure. Suggestions for systemic change are still not formulated. They attempt to act according to the strategy, but this process is quite difficult, since they personally resist more components, such as preparing a production plan, etc. Change

is however evident in some areas, but it is still not part of their everyday mechanisms. They do feel the change at top management level, but they are immensely skeptical about it. Acting upon strategy requires serious change on their side.

The Technologist and the Production Manager feels the pressure; therefore, they do try to come up with recommendations. Production Manager still does not select, is not in control of the selection process, she rather delegates it to lower levels. She does not believe that such a strategic declaration can have an effect on a complete organization. The Technologist still selects along his own time factor. He sees that less products result in less burden, but his detriments still overwrite this experience. Shift supervisory level expressed its opinion about production processes, but they did not have any systemic improvement recommendation. Since levels above them did not show any sign of change in their behavior, there is no intention to change on their side either.

6. 3. 4. Organizational level

Overall it can be said about the first half of 2017 that in terms of variation activity there was a strategic shift, which established a healthy selection process regarding products and customers. However, this change has not reached all levels. Culture has started to change for the better, thanks to the commitment of top management and the previously described factors. There is a slight shift backwards on a daily level, but change can be observed overall.

Table 19 summarizes the evaluation of organizational players and levels along the variaton-selection-retention dimensions.

Table 19: Evaluation of organizational players and units of the company along the adaptation process in the first half of 2017

Level of analysis	First half of 2017		
	VARIATION	SELECTION	RETENTION
CEO/Top manager-individual level	Variation activity is minimal	Setting priority is part of the strategy; therefore, he sets priority for certain products and customers.	A new behavior and attitude is rising at top manager level. He becomes more legitimate as a leader, but he still reaches back to his old methods.
Commercial department – group level	Product development initiatives decreased since according to the new strategy.	It is more and more accepted that they can let go of customers, markets, products and activities. Priorizing starts between customers and products.	They accept the notion of being smaller, and they have started to wait and be patient with production. Of course there is a slight skepticism, since problems are still in existence.
Commercial manager – individual level	Recommendations for improving processes.	He agrees with the selection mechanisms defined in the strategy.	Committed to strategy. Skepticism about the attitude of top management and production, but he gives them the benefit of doubt
Key Account Manager – individual level	Tenders are in line with strategy	Becoming more and more open to let products go that is hard to produce or generate little margin	Problem solving and information mediation: problems mostly reported by customers are forwarded to production
Retail manager – individual level	He insists on producing higher quality products for own shops.	Decreasing number of product variants amongst foreign and own products.	Problem solving and information mediation: problems mostly reported by customers are forwarded to production
Sales representatives -individual/ group level	Defining only in-out, seasonal product development ideas.	Continuous evaluating customers and markets in regional markets. Priorizing between customers based on amounts, income, margin.	Problem solving and information mediation: problems mostly reported by customers are forwarded to production
Production – group level	Process improvement recommendations are still a result of management pressure. Suggestions for systemic change are still not formulated.	They attempt to act according to the strategy, but this process is quite difficult, since they personally resist more components.	The plant is "manually controlled". Change is however evident in some areas, but it is still not part of their everyday mechanisms. They do feel the change at top management level, but they are immensely skeptical about it.

Production manager/ Plant manager – individual level	Production Manager feels the pressure, therefore she does try to come up with recommendations.	She still does not select, is not in control of the selection process, she rather delegates it to lower levels.	She is tired. She does not believe that the top manager and the organization will be able to change.
Technologist – individual level	There is no sign of independent initiative; he only prepares sample products as determined by the innovation team.	His schedule is a serious bottleneck; only those samples are prepared, which he has time and focus for. He perceives that there is significantly less sample to prepare.	His detriments still overwrite his experience, he resists to change.
Shift supervisors - individual/ group level	They expressed their opinion about production processes, but they did not have any systemic improvement recommendation.	Decision making mechanisms are based on old routines; daily production demand and bottlenecks (capacity of production lines and employees) determine what stays and what goes, which product is produced and which one is excluded, which customer is served fully or which one is not served.	Since levels above them did not show any sign of change in their behavior, there is no intention to change on their side either.
Plant workers – group level	Individual interests: looking for loopholes, theft, malingering, and smoking	Without control and consequences, loopholes are found.	Production sequence and technology processes based on habits from previous months, years. This has to be carried out by a labor force of deteriorating quality.
Procurement - individual/ group level	Channeling new product ideas of suppliers to production, the technologist and upper management.	Selection activity is solely to make decision based on price.	He focuses on keeping the costs at a low level and this is the driving and organizing factor in purchasing and warehousing
Engineering, maintenance – individual/ group level	Installation of a new production line but he only participated in it in operative tasks.	No selection activity	Mostly post-interventions. Mostly those machines are fixed, which are either reported or already broken. New machines also do not get higher level of attention.
Accounting – group level	No variation activity	Selection in the finance department is carried out along the availability of resources	They work by old routines, reports and statements are done in the previous systems.

IT – individual level	No variation activity	No selection activity	Insistsing to keep the current system, but he does not have any development ideas. His activities are limited to system operation and software and hardware maintenance.
Organizational level	Variation activity is in line with strategy.	The selection mechanisms start to be based on strategy. It is still the beginning. It already has effects on some processes but not on the whole company.	Culture has started to change for the better. There is a slight shift backwards on a daily process level, but change can be observed overall

6. 4. Summary of analysis

In this coming section I summarize the conclusions of these three periods in terms of adaptation and learning.

In 2014-2015, thinking about product portfolio was characterized by the attitude of "how we used to do it". Competition also had a characteristic effect: "everybody develops newer and newer products on the market". Therefore old mechanisms were not revisited by the management; they did not actually analyze the market which they developed the product for. They tried to acquire new customers, and if that customer needed a certain product, they developed it, because this used to be the key to success. This is how the company stayed competitive.

Problems started to show up – with a peak in 2016 – when the capacity of production started to run out and they could not continue this strategy with impunity. In terms of production capacity, neither time nor workforce was enough. The management of the production facility and factory workers based their decisions on past experiences: e.g. production deficiency and surplus were both directed to own store network. These were deeply embedded practices, and even when management declared to formally change it, there was no evident change in practice.

Sales department was also unable to let go of products until management declared that there is no need for problematic customers, who have unique expectations. Even after launching the new strategy, half a year or even three quarters of a year needed

to pass before sales force was able to express the same direction. Until this direction was not consistently represented by management – which started in 2017 – change was simply not happening. There was no visible shift until management was not fully committed to the fact that there is no room for mistakes when producing leading products. In case of these products, the management's expectations were more serious compared to other products with smaller batches, sold to less emphasized customers. It took 1-1,5 years from the first visible problems for this shift to reach shift supervisory and factory worker levels.

All this occurred because there was a shift in the organization. While certain departments and organizational levels dealt with variation only, other areas had a more dominant role in selection and retention. If a leader – lower or higher or top level – only deals with one of these, learning remains single-looped. Therefore not only exploiter, implementing departments and levels need to innovate, but there is a need for continuous innovation, i.e. introducing new things to the organization can become a routine as well. It is not enough to bring new ideas, implementation and selection-retention need to be managed as well. If a leader is not able to change in these areas, and is stuck in single-looped learning, adaptation will depend on the road, and expert intuition will have a leading role, i.e. leader will act according to old habits, when bringing a new product or customer. This is obvious in the company's product development activities.

First of all, in order to challenge abilities and conditioning, cognitive change is needed, so the individual – in this case, the leader, top manager – will be able to challenge previous assumptions, which is unconsciously determined by expert intuition. However this alone is not enough, it must go together with change in behavior. The behavior and attitude of the leader and the reactions given to them condition the behavior of the group, the organization.

The attitude of the management conditions the organization behavior patterns, e.g. if the leader solves everything, lower levels do not learn to make decisions independently, and take responsibility, etc. This is what happened in production facility 1, which is now controlled manually. If the leader does not control properly, the lower levels of the organization start to believe that they can do whatever they want, etc.

On the other hand, if someone has improvement ideas, such as the Technologist, and these ideas had been disregarded and had not been taken seriously in the past, the organization might be conditioned not to express their ideas, because they are not taken seriously and change simply does not happen. Therefore it takes time for these ideas to surface again; employees need to be reassured that the attitude of the management has changed.

Routines do not develop by themselves, but the organization's feedback systems (internal and external) steer the organization in this direction. Since these factors are controlled by management or interprets it as a threat from external environment, the leader directly or indirectly conditions the organization to develop a certain attitude, routine. The organization is unable to let go of these routines until the leader accepts that he needs to change in order for the organization to sense, accept and change its attitude, routines and processes in a positive direction. It is important to note that according to the Lewin Model, it is not only the organization that needs to be changed during adaptation, but forces which condition routines must be changed as well.

This was also the case with this company; it was not enough to have the need for change at a cognitive level, change has not started or imprinted until the management changed its behavior, attitude and thinking, e.g. withholding product development, letting go of customers. The leader's double-loop learning was the key to set the organization's double-loop learning afloat.

7. CONCLUSION, MAIN FINDINGS

In this section I present the main conclusions, findings of my research.

7. 1. Organizational learning is constantly present, it is not a result of choice

Literature on organizational learning identifies two major groups within research on organizational learning: one examines organizational learning from the perspective of capacity, the other focuses on group processes (Chiva et al., 2007). My research concerns the latter, the approach focusing on processes. Research on the process of organizational learning primarily focuses on whether organizational learning has occurred and measures what results it has on various organisational levels, on the levels of the individual, the group and the organisation. My research concludes that researching organizational learning requires a different approach due to the turbulent changes of our age. Learning, may that be individual, group or organizational learning is constantly present in the life of organizations, it happens continuously, therefore, periods of learning and non-learning cannot be distinguished in the life of organizations. Regarding management, the following questions must be asked:

- How conscious or unconscious are learning processes within the organization?
- To what extent are learning processes controlled by the management?
- To what extent is learning a routine within the company?
- To what extent is learning path-dependent within the company?
- Is the organization capable of learning good things or change previously ingrained bad routines?
- Does the organization have ingrained bad habits? What are these? What is the reason behind them?
- What is necessary for double-loop learning to happen in the organization?

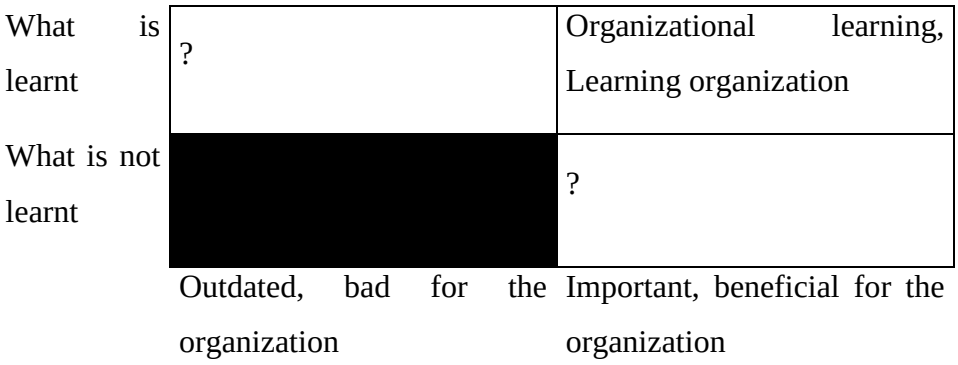
Research highlighting the importance of organizational learning and the path to become a learning organization merely set the objectives to be achieved, however, do not deal with how an organization, for example a typical medium-sized entreprise in Hungary actually learns or does not learn and what supporting and hindering factors

are present on the path of becoming a learning organization. The results of my research shed light on the complexity of learning processes within organizations and on the fact that establishing a more adaptive and successful organization requires understanding the nature of organizational learning processes. I believe that the results of my research fill the gap in knowledge on the field that assists leaders of business and non-business organizations to embark on the path to become a learning organization.

Obviously, stating that organisational learning is not a choice but a constantly present process in the organisations is not an entirely new idea. The innovative aspect of the research is defining what constitutes an organisational learning process. Routines continuously develop within an organization, with the organisation attempting to simplify processes, while incremental changes are happening at individual, group and organisational levels alike. Literature on organisational learning rarely deals with these processes. The results of my research draw attention to the fact that these processes must be taken into account in terms of organisational learning, since based on the definition of learning, every long-term behavioural change can be regarded as learning. The organisation might "learn" good and bad things that can happen at the level of the individual, group or organisation, and they do happen despite the best intention and highest attention from the management, since this is an adaptation process.

Existing research on organizational learning and learning organizations concentrate on the one hand on what the organization learns and consequentially regards this learning a beneficial and important activity from the perspective of the organization. My research, among others, highlights the necessity of taking two additional sections into consideration when studying the organizational learning of a company. Firstly, in the course of the above-mentioned continuous adaptation process, the organization might learn things that are bad for the organization or are outdated compared to the environment that had changed in the course of time. Furthermore, when examining adaptation, things that are important from the organization's point of view but are not learnt must also be tackled. This is summarised in Figure 7 .

Figure 7: The focus of organizational learning literature and gaps in literature



Cells marked with a question mark are fields that are mostly only indirectly touched upon by research, such as organizational ecology, organizational ambidexterity, unlearning. My research sheds light on the necessity of a joint examination of these fields since they are also results of learning processes. In other words, organizational learning can have three different outcomes that are important in terms of understanding organizational learning:

- the organization learns good and important things
- the organization "learns" bad things or previously learnt things become outdated
- the organization does not learn good and important things

7. 2. Organizational learning as an adaptation mechanism

From the perspective of strategic adaptation, it is of utmost importance for an organization to be capable of renewal from time to time and thus to be able to adapt to internal and external changes. Organizational learning is a constant adaptation in the organizations' lives, therefore, in terms of managing organizational learning processes, learning actually constitutes an adaptation process. In the course of this process, an induced learning process is present in the organization that is controlled and managed by the management, besides an autonomously developed, not, or less controlled learning process that is simultaneously present. In case the organizational learning is appropriately managed and controlled, it is beneficial for the organization, if it is not, the autonomously developed processes gain ground and the organization adapts to the external environment and the internal qualities in a certain, mostly

evolutive way. This does not necessarily serve the organization. From the perspective of organizational learning, these autonomously developed, not controlled learning processes are results of ingrained routines, strengthened by the external market and the internal organization, which conditions the organization. Behaviour patterns that are positively confirmed or do not receive negative confirmation, will remain, while the rest will be likely to be dismissed.

According to Burgelman [1991], the organization undergoes the process of evolution, i.e. variation, selection and retention. Studying these processes is crucial if we want to understand organizational learning. Based on the internal adaptation processes of an organization, Burgelman distinguishes autonomous and induced strategies. Burgelman believes that a combination of these strategies assists the adaptation of the organization, since autonomous, bottom-up initiatives might lead to solutions that contribute to the growth and adaptation of the organization, thereby leading to better results, as if the organization was implementing the intended strategy of the top management. Nevertheless, the case of the organization subject to my research suggests that when studying the variation-adaptation-retention process, a multi-level, process-centred approach is necessary .

Regarding variation, in the case of the studied organization, the variation processes predominantly originated from the top management or the commercial department that was in close contact with the external market. The content of the variation fundamentally targeted the exploitation of a new market opportunity, such as serving a new customer, launching a new product or opening a new retail unit. Based on this, the variation process is closely linked to the learning processes. The variation process is mostly induced, it was most often initiated by the middle or top management.

According to the ecology model, variation is followed by selection. However, I observed in my research suggests that the selection process did not directly follow the variation processes but usually happened in a delayed and non-controlled manner. This process is not induced and happens in a rather autonomous way, furthermore, the actors involved in the process are typically different from the people and areas involved in the variation processes. On the one hand, selection is performed by the market, for instance, a non-viable product is not bought by

customers, on the other hand, the processes are being dismissed at a certain level or area of the organization too; the employee involved does not allocate appropriate attention and time to the given activity. This typically culminates where narrow bottlenecks develop. Such bottleneck might be the production and supply capacity, the working time available for the employees, attention of the management etc.

The selection process develops autonomously as a result, the “organisation selects”, however, many times it does not lead into a direction that serves the strategic interest of the company. In this case, lower levels of the organisational structure and the implementing, exploiting fields are involved in the selection.

The non-consciously directed selection process occurs among others for the reason that the variation process takes priority over the selection, and during both variation and selection, companies do not devote attention to check how the new product, customer, channel, business opportunity etc. fits into the existing activities of the company, as well as how these previous activities are influenced.

Retention follows selection, however, since the selection happens in a was that is non-directed and does not align with the strategy, usually the unfavourable processes and solutions are ingrained. As a result of the selection process not being managed, retention is not managed either, therefore, the principles that apply during the process are highly similar. Therefore, if the whole process of development of routines is not directed by the management, an evolutive process will occur and the organization will select, in other words, the evolutionary process, the selection will begin within the organization. This happens not only at the level of ideas and new initiatives, but within all of the processes and activities.

Since the selection process happens with a time lag and in reality is only partially completed, the organization, especially the top management is not confronted with the fact that bad processes are ingrained in the organization and the complexity of the company increases. The more often variation processes happen and the less frequent the negative feedback from the external market is, the deeper these processes are ingrained in the organization.

7. 3. Role of bottlenecks

Regardless of the fact whether the management controls these processes appropriately or whether it can maintain the harmony among them, approaching learning processes as adaptation processes results in the organization making a choice among one of these processes to a certain extent. The question is whether this "choice", which might not be conscious at all but is rather a result of an evolutive development, is good for the organization in the long-term or not. Therefore, the "choice" is made in the organization, either as a result of a conscious and managed selection or a non-conscious and evolutive development. Why and where can this evolutive process commence?

Learning will always be accompanied by "scarce resources", selection always happens, since there are solutions and activities that can only replace each other and cannot be present simultaneously. This thought is similar to the results of March

Bottlenecks limit learning. Bottleneck follows the variation process, the organization begins to select alongside the bottlenecks because it cannot cope with the variation activity, and if it is not managed, a bad selection process will be ingrained at the retention stage. In order to be able to properly carry out selection, it is necessary to let certain things go, to reduce variation, and to manage the selection and retention processes alike. It is a question whether the manager will recognize the limits of the scarce resources.

The task of the manager is on the one hand to recognize when it is necessary to change previous approaches and to recognize how their own routines, their managerial tools and the routines of the organization must be changed. The manager must recognize where the bottlenecks are or can be within the selection and retention processes, and which are the points that should be reinforced in order to decide what the organization should let go, select and retain. This must not be handled as an autonomous process, since the moment the organization is in charge of it, the organizational learning process will be practically dismissed since the organization's interest is to return to the more simple, old, certain and habitual processes. Developing new processes is not in its interest.

An entrepreneur-type leader should become a manager. The leader should pay attention to selection and implementation instead of the building role, only then they could return to new things. Entrepreneurial and managerial roles are not subordinate to each other. From the perspective of organizational learning, it is crucial that the leader is capable of incorporating both of these roles and of properly choosing between them at various phases of the adaptation.

7. 4. Role of top manager in organizational learning processes

Adaptation must happen not only at the level of the organization but also at the level of the individual. Leaders cannot limit themselves to dealing with what they used to focus on or what they prefer. They must recognize what is needed in the organization for proper adaptation to happen. It is the responsibility of the top management to lead the process towards a proper direction and to properly manage the important learning mechanisms of the organization in order to ensure that the organization is successful and adaptive in the long-term. My research focused on what influence the top management has on how the organization is capable of learning and what the important conclusions are in this regard.

It is important to note that organizational learning, along with the management of organizational changes in small and medium entreprises, from the perspective of top management, is not merely a brief planning activity that can be completed from behind a desk, but it is a lengthy and demanding process where the top management is actively involved as opposed to being a passive observer. What does an active role entail and what does it lead to if the top management is not active in this process? My research shed light on the importance of top management in forming the routines of the organization.

During my research, I experienced the interesting phenomenon that the before-mentioned routines and ingrained routines are not only present in the value-creating processes, everyday activities and cultural values, but also in factors such as interaction among staff members, hierarchy of the organization, relationship with the executive manager/top management, strategy mechanisms, the organization's approach to the markets and external environment, etc.

My research revealed that the top management of an organization is also involved in the ingrained routines, moreover, the behaviour of the top management fundamentally determines what routines become ingrained, in other words, the top management "conditions" the organization's learning. For this reason, in order to leave behind the routines and the ingrained routines that are not favourable from the perspective of adaptation, it is crucial for the top management to change, as well as to adapt its previously used management tools. The commitment of the top management to change is not sufficient in itself, the change must be more than a mere cognitive change, it is necessary that it manifests in the everyday behaviour of the executive officer. This is essential in order to ensure that a proper learning process happens within the organization. Cognitive and behavioural changes cannot be separated and examined separately in the course of this process.

Therefore, the top management must be capable of recognizing its own bad routines or the tools and routines that are non-functional in the given context, and it must induce changes. Thus, in order to trigger a change, unlearning and releasing old routines are necessary at individual levels too, including individual behaviour and leadership tools as well. This requires self-criticism. In order to ensure continuous learning, the leader must be capable of double-loop learning. This is a highly demanding process since the management is involved in these routines, and if the management had been present in the organisation for a sufficiently lengthy period, the major part of the culture was developed by them. Unlearning literature highlights that to recognize this need is very difficult and serious destabilization effect can motivate the individual to change old routines.

If the leader aims to manage the adaptation and learning processes of the company, they must change themselves and the system simultaneously and must also be capable of triggering both cognitive and behavioural changes. In case the leader fails to achieve this, the changes that happen at certain levels will be futile and the previous conditioning mechanisms will continue to prevail. This will result in the strengthening of previous routines in the organization.

However, it is likewise not sufficient if the changes are only induced by the executive manager and the top management, since the changes must be conducted through the whole organization. Previous experience towards the top management influences the organization to such extent that after a while the organization does not have belief in the management being capable of a different way of thinking and acting, since earlier experiences prove it otherwise. The longer was the duration of the routines to become ingrained and conditioned to that behavioural pattern, the more difficult it is to induce a shift and the unlearning of old badly ingrained routines at an organizational level. The first reaction will be that nothing is going to change anyway.

Besides, the less the employee experiences changes in higher positions, the less they will change themselves or they will soon stop attempting, since it is more secure and less confrontational to reach back to the old habits and work alongside them, using old tools. In order to achieve behavioural changes in the organization, being exposed to new experiences is necessary for the individual and thus the organization, which can result in new ingrained routines. This can be generated by the top management.

This is not a temporary, but a constant and continuous activity and process, which, if not managed by the top management and is not harmonized with the environment and the internal context of the company, will still develop in a certain manner. What is not developed by the management, will be developed by the organization, primarily by dominant individuals within the organization. Therefore, the top management has a prominent role in properly developing, managing and controlling the learning mechanisms of the organization.

This requires not using exclusively the previous routines but recognizing when certain routines become outdated, when it is time to let them go and return to a previous solution, and when it is more beneficial to keep something that functions properly. This must be acquired at the level of the individual or the top management team, since if the top management fails to induce changes, it authorises the organization not to feel responsible as individuals to trigger changes.

The effect of expert intuition, an experience-based intuition and learning, is greatly significant at this point. It is challenging for an executive manager to “drag” the organization out of old routines when the manager was partly responsible for their

presence or for their development. This requires individual unlearning and thus double-loop learning. Following the individual learning, it is important that the manager is capable of institutionalizing this learning at cognitive and behavioural levels alike.

7. 5. Main ingrained routines of the manager as obstacles to organizational learning

The entrepreneur-type executive manager plays an especially significant role in the development of the organization, their learning process being fundamentally influential to the content and process of organizational learning. In the absence of bad omen, double-loop learning will not take place and incremental learning will be much stronger. It would be the responsibility of the executive manager, the number one leader, to recognize the necessity for change. This poses a great challenge since the leadership toolbox and the solution previously used is similarly ingrained and routine.

The executive manager must be aware of the fact that the way the organization used to function prevents double-loop learning and the ability to trigger a radical change in order to achieve strategic adaptation. The organization is going to represent and force the solutions and mechanisms that it used to perform. People who are capable of changing their behaviour, leadership toolbox, way of thinking, communication and routines are extremely rare, practically non-existent. Basically, in order to make an organisation more adaptive and guide it through the adaptation process, one must be aware that previous convictions, way of thinking, behaviour of the management and the organization's reaction to these must be tackled. It must be recognized that everything should be kept under close supervision, because the moment something is not controlled or taken care of, the organization stops being guided through the selection process.

Learning processes might be distorted by the orientation of the executive manager. It is an important mistake for the management to pay so much attention to variation that the selection and retention are not managed. Cognitive change necessary for double-loop learning typically occurs during the variation phase. However, the effect of old routines and habitual things on learning is more significant during the phases

of selection and retention. This is the reason a leader cannot focus merely on the variation, initiating new things and brainstorming, but should assist the organization in the selection process in order to ensure that the selection happens in a way that is important for the adaptation of the organization. It is not sufficient to bring in new ideas and issues, the whole selection mechanism must be seen through.

It is considerably easier to add new things to existing ones, to bring a new machine, than to create something completely new. The existing one is part of the culture, the embededness and the routines. It is for this reason that leaders prefer to deal with a new product, a new customer or a new market than to reorganize the existing product portfolio, the organization and the processes.

Growth-oriented organizations are open to new opportunities, therefore are characterized by significant variation activities. This process is fundamentally related to the entrepreneurial role. Entrepreneur-type leaders are open to researching new opportunities, taking risks, they are innovative, capable of recognizing new opportunities and are in favour of experimenting. Nevertheless, in order not to create conflict between the new and existing activities, a selection process is necessary. Selection, however, requires a different way of thinking. Efficiency, implementation and evaluation of bottlenecks must become priority, and thus also the selection process that serve the interest of the organisation. In other words, the properly managed selection process creates the transition between the existing and the new. This is best supported by managerial mindset. In conclusion, the top management must be able to let go of continuous variation and must also deal with proper selection.

Routines are developed in the retention phase, new learning becomes ingrained here. In order to ensure long-term benefits for the organization, a proper selection process must happen first. At this point, it is not only the new product, customer and activity that becomes ingrained, but also the way the organization thinks about them. Managerial role becomes prominent during the retention phase too, since during implementation, the top management must secure the proper adaptation of newly ingrained routines to the previous ones, therefore, effective implementation comes to the forefront.

7. 6. Organizational learning is a process and therefore must be studied like one

Fiol & O'Connor [2017] highlight that the organizational functioning is based on routines and organizational behaviour is path-dependent. My research reinforced this theory too, organizational learning being likewise path-dependent due to the close relationship with the change processes of organizational routines. As a consequence, organizational learning cannot be understood at depth and examined within an organization with a sectional approach, a longitudinal approach is needed. This is important in order to understand what effects earlier experiences, effects, results, successes and failures have on the present, and thus how past should be tackled and what responsibility top management has in it.

Among others, researchers of the phenomenon of unlearning [Starbuck, 2017; Fiol & O'Connor, 2017] drew attention to the importance of in-depth analysis of this process. A clarification of the types and levels of ingrained routines that characterize companies and their effects on organizational learning is therefore regarded as a priority. Literature on change management also mentions that in order to trigger change in an organization, first it must be unfrozen from its present condition, the it must be changed to its new condition which must be reinforced, in other words, it must be refrozen. Lewin's [1947] model describes that the organization must be lead from its old condition to a new one, a thought that is similar to the idea of unlearning, i.e. that the organization must unlearn old routines and replace them with new ones.

My research confirmed that the organization becomes accustomed to what can and cannot be done. As a result of past conditioning processes, consequences of events are ingrained in the organization, i.e. the processes become embedded. In order to ensure that proper organization learning takes place with regard to changing conditions of the environment, these ingrained routines must be changed. From a research point of view, this highlights that the roots of learning, the presence, deficiencies or absence of learning abilities cannot be tackled independently of past learning processes and knowledge of the organization that accumulated in the course of time. It can thus be concluded that studying organizational learning at such depth requires longitudinal research that reaches down to the levels of routines and embededness.

8. SUMMARY

I strated the introduction of my dissertation with the statement form Birkinshaw et al. [2014] that management research needs to be phenomenon-driven. I think in this thesis I presented an analyzis of a phenomenon that has several contributions for literature, methodology and practice. I wanted to find answers for the following questions:

1. How does the process of adaptation and learning happen in growth-oriented middle-sized companies?
2. How do the different organizational levels and functions connect in the process of learning and adaptation (variation–selection–retention)?
3. What kind of relationship exists between the results of past adaptation and current adaptation?
4. What role does the entrepreneurial manager's learning process (cognitive and behavioral change) have in these processes?

I sum up the main findings of my research, I touches the limitations of my research and I define further research directions.

8. 1. Contribution to literature and methodology

The literature on organizational learning and adaptation is largely future-oriented and prescriptive. Entrepreneurial adaptation is an idealistic adaptation form that guarantees adaptive capabilities for companies through innovation, proactivity and risk-taking behavior. This research suggests that the processes of organizational learning and adaptation cannot be understood without analyzing previous change processes, since embedded knowledge and routines affect the organization's capacity and ability in the present and the future. The main findings of my research that contribute to the organizational learning and adaptation literature are:

- Organizational learning is a consciously managed process that is the result of choice, and is also constantly present because of routinizing processes. As a result of this, the organization might learn or routinize things that reinforce poor performance and adaptation as well as good. It might also not learn

important things. The organizational learning literature does not examine these two possibilities.

- Inefficient ingrained routines can evolve when the top manager does not consciously manage internal selection and retention processes, and leaves them to the organization. As a result, routines evolve to fit other organizational routines. This also happens when the manager starts a new activity in the organization, such as a new product, customer, technology or process. In these cases, the organization will often start to select alongside the bottlenecks if the top manager does not do so.
- Routines that determine or affect the process of organizational learning are not only present in organizational processes but also in the relationship between the organization and the management, at both group and organizational level. The leadership toolbox and its use can also become routinized, conditioning the organization to particular behavior and thinking. To change these routines, top managers need to change themselves and their leadership toolbox.
- My research also makes a methodological contribution. It shows that a deep and longitudinal examination is needed in organizational learning and adaptation research. The real processes of learning cannot be explored by cross-sectional analysis, because this does not allow understanding of cause-and-effect relations.

8. 2. Contribution to practice

Organizational learning and adaptation have several practical aspects as research topics. My research explores how innovative, proactive organizations, which have been able to grow in the past, and are managed by an entrepreneurial manager, can lose their adaptation capability. I believe that I have found answers to this question and these are important for managers and experts in practice. They include:

- To adapt successfully as a top manager, it is not enough to initiate innovation, and develop new products, customers, markets, technology, and processes in the organization. Top managers also need to ensure that these new developments are integrated into existing business units, customer and/or product portfolios, technology and organizational processes. If this is not

done, the manager simply increases the complexity in the organization and leaves the implementation and therefore the success of the innovation process to lower organizational levels.

- The manager's behavior and thinking condition the company, department, or group that is managed. The relationship between the organization and management becomes routinized, and will determine how the organization will react to change initiatives in the future. Managers need to reconsider their own routines and the systems responsible for conditioning (for example, organizing and control systems) to be able to induce change in the organization.
- Even if managers do not engage with the organizational learning and adaptation processes, these processes will continue to evolve. The organization may therefore strengthen and embed inefficient or ineffective routines, or earlier effective routines may become obsolete. The manager's task is to manage these processes properly.

8. 3. Limitations and directions for future research

My research was a qualitative case study using ethnographic methods, drawing on data collected between February 2015 and May 2017. This approach has several limitations. The small sample size (of one) means the findings are hard to generalize and cannot be separated from the organizational and environmental context of the organization concerned. The company studied is a typical Hungarian, Hungarian-owned middle-sized company. Smaller or larger organizations are likely to show very different organizational characteristics; for example, multinational companies are usually much more organized. The findings of this research are therefore mostly relevant for companies of a similar age, size and life.

I did not analyze the direct effects of industry and sector on the company. In other sectors, there might be other aspects of interest, but these are not clear from this study. I also did not analyze the ideal organizational structure and operational processes for learning. I therefore cannot comment on the tools, organization and leadership style that would support the ideal adaptation, the variation–selection–retention process.

Future research might continue this analysis with other similar companies, comparing cases, and defining similarities and differences. It would also be worth analyzing smaller, larger, younger and more organized multinational companies and defining the similarities and differences. It would be interesting to examine family-owned companies of a similar age and size, in which the top managers are family members or have been at the company from the beginning, or to examine companies with a broader top management team. In this case, it would be worth investigating the top managers as individuals and as a whole, to see how they affect each other.

Finally, there may be other factors affecting organizational learning processes that could be studied. These include power, the presence of more and less dominant individuals and their effects on organizational learning.

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10. APPENDIX

Appendix 1: Question list used in the first section of data collection

Questions about operation activities:

- Please draw the organigram of the organization! Where are connections between different units, levels, persons in everyday work? Tell some words about these!
- Please sign in the drawing who is/are the main decision makers in the organization? Is the organization centralized? Why are those collegues responsible for making decisions?
- What kinds of decisions does the main decision maker make? How much is he/she involved in daily decisions?
- Do you have a superior? Who do you get instructions from? Are there any consultations? Is it typical that others have instructions for you?
- What are the typical coordination mechanisms at the company? (structural, technocratic, person-oriented)
- Are there any policies at the company? What kinds of policies? What would you add to these policies? What do you think about policies at all?
- Does the company have financial plans, budget, financial framework? What do these include?
- Is there a formalized hierarchy at the company? Is it ablo to coordinate everyday work?
- Are there temporal teams in your organization (project, team, committee)? What role do they have in the organization? Do the members of these team have simultaneously a fix position and tasks to do?
- Are there meetings at the company? Who attends these meetings? What is the goal of these meetings? How often does the company hold meetings?
- Is there a product management system at the company?
- What is the role of IT? Is it a single function? Does it have a significant power or is it just a supporting function?
- Are there any conflicts in the company? If yes, please tell some words about these conflicts. How does the company try to solve these conflicts?
- How can you characterize the general mood at the company?

- What is more important the will of the individual or the will of community at the company? Is there any competition between collegues?
- Does the company rewards individual initiatives?
- How can anybody at the company become a manager? Is there often shifts in certain positions?

Questions about goals:

- What are the main markets? What are the characteristics of these markets?
- What kind of factors do determine the customer satisfaction?
- What does the company to improve organizational processes?
- What does the company in order to develop continuously?

Questions about own tasks:

- What kind of tasks do you have based on your job description? What kind of task do you do in reality compared to the job description?
- Do you have any task that you do but it is not yours?
- Is there any task that you do not do, but it would be yours?
- What would be the ideal tasks for you to do in your current position?
- How can you divide your tasks into usual, recurrent and ac-hoc tasks?
- What do you do in your work most?
- What kind of tasks do you get from your superior besides your daily ones?
- Are your tasks challenging? Why?
- Are you tired in work? Why?
- Do you participate in making strategic decisions that set future goals?
- Did you initiated innovation, change, development in the organization? Why? Why not? Were these successful?
- What type of tasks are not done in the organization but would be important to do?
- Who do you give tasks/information? Who do you get task/information from?
- What are those decisions in which one of your collegues makes decisions instead of you?
- Whose work does have an effect on your work, performance? Who does your work have an effect on?

Appendix 2: Coding structure

Burgelman [1991]

- Variation
- Selection
- Retention

Crossan et al. [1999]

- Intuition
- Interpretation
- Integration
- Institutialization

Argyris [1977] and Bakacsi [2010]

- Single-loop learning
- Double-loop learning
- Cognitive chang
- Behavioural change

Fiol & O'Connor [2017]

- Routine
- Destabilization – process of questioning old routines
- Discarding – letting go of old routines
- Experimenting – processes of learning new routines

Organizational levels

- Individual level
- Group level
- Organizational level

Markets

- Central warehouse market
- Own network of shops
- Regional market

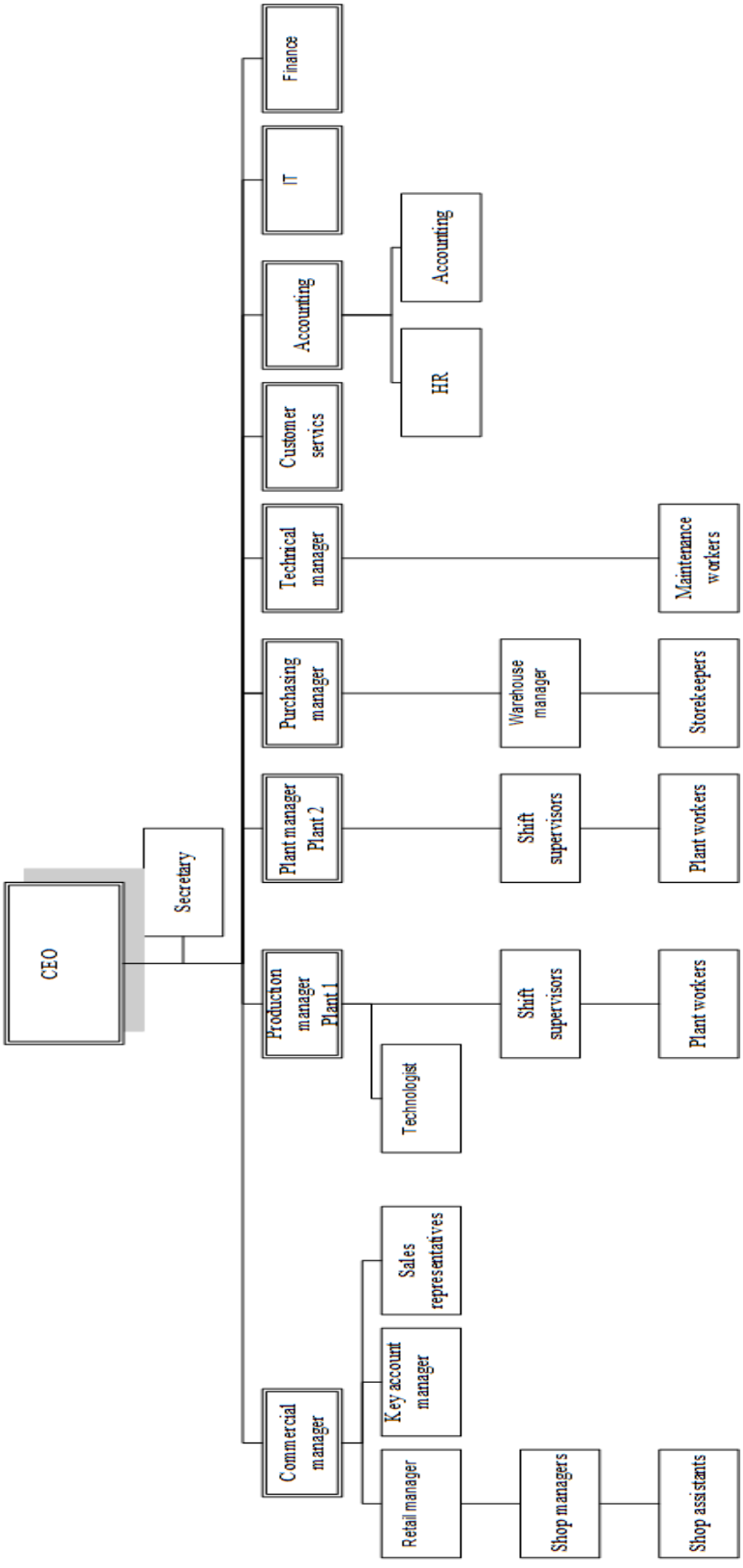
Functions

- Top management
- Production Plant 1
- Production Plant 2
- Procurement
- Sales
- Engineering and maintenance
- Accounting
- Customer Service
- IT

Individuals, groups:

- CEO
- Commericial manager
- Key account manager
- Retail manager
- Sales representatives
- Purchasing manager
- Production manager Plant 1
- Technologist Plant 1
- Shift supervisors Plant 1
- Plant workers Plant 1
- Plant manager Plant 2
- Shift supervisors Plant 2
- Plant workers Plant 2
- Technical manager
- Maintenance workers
- Accounting
- Customer Service
- IT
- Product development (Innovation) team

Appendix 3: Organizational structure (organigram) of the company



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