

Balance Within the Control Levers

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Abstract

This paper conducts a case study to examine the relationship between balance and management control systems (MCS) in organizations that are confronted with paradoxes. Through the integrated application of Simons' (1995) levers of control framework and paradox literature (Smith and Lewis, 2011), we identify a new way of understanding the notion of balance: *balance within* the control levers. We find that (i) balance within the control levers is created when each control lever addresses all paradoxical elements of the corporate strategy, (ii) in the presence of organizational paradoxes, balance within the control levers can be a prerequisite for balance between control levers, and (iii) in the absence of balance within the control levers, the reinforcement of opposing forces to restore or strengthen the balance between the control levers can lead to unintended and counterproductive outcomes. The findings of this paper contribute by further advancing how the notion of balance in MCS can be understood.

Keywords: balance, control levers, management control systems, paradox theory

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1 Introduction

“[Electrification projects] don’t fit into the normal way of estimating. So, when we are doing an electrification project, we cannot [prove profitability] in the same way. And then the project will stop, and it will be questioned, and it will end up in the ‘nice to have’ batch. This is a classic in disruptive technology. [...] And this is where people like me feel, ‘now Nokia [...] flies by’. These are signs that we are [fat and happy] and that we don’t manage to assume a different perspective on what needs to be done” (Head of Powertrain Research at TruckFirm).

This paper responds to the request to further advance the management accounting literature’s understanding of the notion of *balance* (Kruis et al., 2016). The notion of *balance* is remarkably interesting in the context of management accounting. Scholars have argued that the *balanced* usage of MCS can help create *dynamic tensions* that are necessary for organizations’ ability to develop *unique capabilities* (e.g. Mundy, 2010). The Levers of Control (“LOC”) framework by Simons (1995) is regarded as a critical analytical tool for understanding and managing balance, and several scholars have pointed out its increasing prominence (e.g. Martyn et al., 2016). However, it is also argued that the notion of balance remains ambiguous (e.g. Kruis et al., 2016). By and large, this paper affirms this testimony. Furthermore, we identify that the management accounting literature has yet to explore the notion of balance in the presence of organizational paradoxes. Indeed, a recent trend in both academia and industry is the shift towards a *paradox-way of thinking*, the presumption for which is that organizational paradoxes work in a unique and complex way (Smith and Lewis, 2011). Paradoxical settings are interesting because, in contrast to non-paradoxical settings, where tensions can be resolved, paradoxical tensions must be managed (Smith and Lewis, 2011). As the notion of balance and the concept of tensions are closely associated, we suspect that the relationship between paradoxes and balance can reveal new insights into how MCS work. Therefore, we shift the focus towards the relationship between MCS and organizational paradoxes to further explore and advance the notion of balance.

Increasingly, organizational environments become more global and dynamic. In consequence, competitive and contradictory demands intensify (Smith and Lewis, 2011). In fact, *“technological innovation sometimes requires industry incumbents to shift to a completely new core technology”* (Taylor and Helfat, 2009, 718), which demands managers to transform organizations and MCS. As Simons (1995, 27) rightfully suggested, and we decisively repeat, *“the right of any organization*

to exist is not perpetual but must be earned". Famously, Nokia and Kodak tumbled down from industry leadership to adjacent bankruptcy in few years. During the press conference where Nokia announced its acquisition by Microsoft for pennies on the dollar, its CEO famously said, "*We didn't do anything wrong, but somehow, we lost.*"¹ This prompts the question of why companies risk failure when confronted with a shift in the technological paradigm. Harvard Business Review suggests that these downfalls are typically not related to technology.² In contrast, failure can be attributed to an inability of leaders to appropriately manage the organizational *paradoxes* that can arise in such contexts. For example, Kodak invented the first digital camera in 1975, only to file for bankruptcy in 2012 because they "*missed the rise of digital technologies*".³ The idea that inappropriate management of organizational paradoxes can threaten firm survival seems bizarre during the normal course of business. However, history tells us that it is not. In consequence, an understanding of the relationship between MCS and organizational paradoxes is imperative.

This paper conducts a single-case study of the Swedish heavy-transportation vehicle manufacturer TruckFirm. The current organizational environment confronts TruckFirm with a paradox: the organization must (A) ensure continued success in the existing, profitable, and still growing business, for as long as possible, while simultaneously (B) facilitate the shift towards the new core technology as quickly as possible. The simultaneous pursuit of multiple, contradicting goals (A and B) represents a paradox (Smith and Lewis, 2011). The current study investigates how paradoxes relate to balance in the MCS. The LOC framework (1995) is used as an analytical tool to explore the empirical account. However, the analytical journey is conducted through a *paradox lens* with the intention of further increasing the nuance with which MCS can be understood in the presence of organizational paradoxes. Through integration of the paradox literature and the management accounting literature on the LOC framework and balance, we can draw upon our empirical account and develop propositions regarding the unique aspects of the relationship between paradoxes and MCS. Indeed, one could argue that we build upon Simons' (1995) LOC framework from a *paradox perspective*. The goal of this paper is to facilitate an increased understanding of academics and practitioners of how the notion of balance is associated with organizational paradoxes.

¹ <https://www.linkedin.com/pulse/nokia-ceo-ended-his-speech-saying-we-didnt-do-anything-rahul-gupta/>

² <https://hbr.org/2016/07/kodaks-downfall-wasnt-about-technology>

³ <https://hbr.org/2016/07/kodaks-downfall-wasnt-about-technology>

Our paper is organized as follows. The next section reviews existing literature and introduces the method theory. Next, the research and data collection methods are presented. Thereafter, the empirical findings and the analysis are laid out. Finally, our concluding remarks are presented.

2 Theory

In this section, we first review a sample of research on MCS and the notion of balance, which broadly defines the borders of our theoretical domain (Lukka and Vinnari, 2014). Subsequently, we introduce and discuss paradox theory.

2.1 The Control Levers and The Notion of Balance

The notion of *balance* is remarkably interesting in the context of management accounting. Scholars have argued that the *balanced* usage of MCS can help create *dynamic tensions* that are necessary for organizations to develop *unique capabilities* (e.g. Mundy, 2010). The LOC framework by Simons (1995) is regarded as a critical analytical tool for understanding and creating balance, and several scholars have pointed out its increasing prominence (e.g. Kruis et al., 2016; Martyn et al., 2016). While the influence of the LOC framework on professional practices is hard to capture, Google Scholar helps indicate the increasing attention the LOC framework is gathering. Tessier and Otley (2012) found almost 800 citations in Google Scholar in 2011; Martyn et al. (2016) counted 2,000 citations in 2014; and today, the equivalent number exceeds 3,600 citations. Yet however widely recognized the LOC framework may be, several scholars continue to argue that it is partially ambiguous (e.g. Henri, 2006; Kruis et al., 2016). Most notably, the notion of *balance* has been subject to debate (e.g. Henri, 2006; Mundy, 2010; Kruis et al., 2016). In example, Henri (2006, 547) argues, “*more research is needed to provide a deeper understanding of the dynamic interplay between the positive and negative effects of tension resulting from balanced use of [performance measurement systems] in a diagnostic and interactive fashion.*” We build upon the idea that the LOC framework is a valuable tool that remains partially ambiguous. In particular, we intend to add to the literature focused on the notion of *balance* by exploring how balance in the control levers operates in a *paradoxical* setting. But first we must understand how the LOC framework is structured and how subsequent scholars have understood the notion of *balance*.

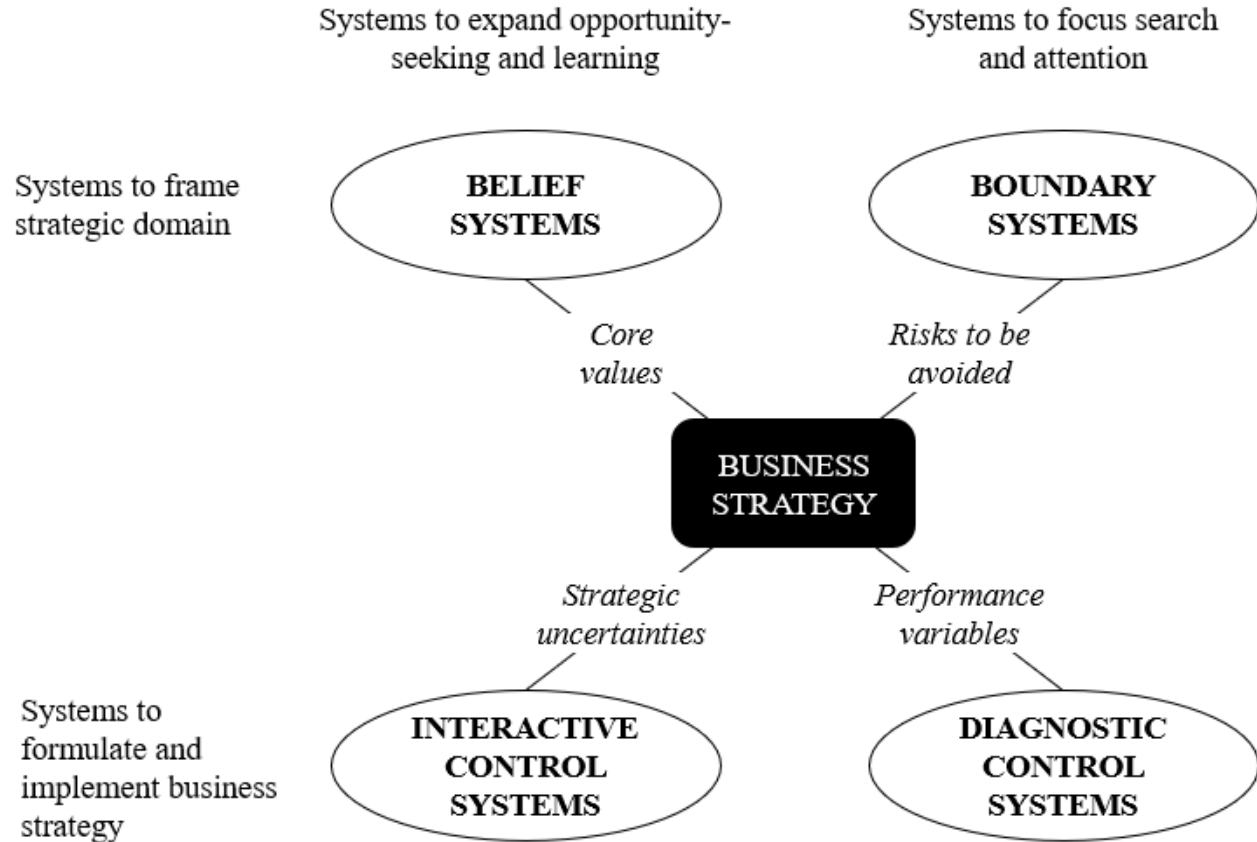
2.1.1 The Levers of Control Framework

The LOC framework is undeniably engaged in the dual use of MCS to enable employee creativity and organizational search and synchronously provide necessary behavioral constraints on employees. Critical to this notion are two core characteristics of the LOC framework. First, the determining element of success is the achievement of *balance* as an enabler of the creation of *dynamic tensions*. Second, the framework is largely concerned with different *uses* of MCS rather than their structure or design. In consequence, the LOC framework is a useful analytical tool to understand the notion of *balance* subject to different uses of MCS (Mundy, 2010).

The framework, dominantly comprised of four control levers⁴, can be explained as follows. *Beliefs* and values are critical to ensure consistent organizational direction, motivation, and commitment towards goals. Explicit, yet broadly defined ideas and statements of value comprise an organization's belief system. The function of these systems is, above all, to stimulate organizational search and act as a positive organizational force. *Boundaries* are necessary to limit opportunity-seeking behavior. A set of rules, definitions, or parameters – almost exclusively expressed in negative or restricting terms – comprise an organization's boundary system. The primary function of this control mechanism is to off-set the positive force of the belief system. If appropriately used, the beliefs and boundaries of an organization will create balance within the *strategic domain* (Simons, 1995). A *diagnostic* use of MCS implies an on-going and operational monitoring of pre-set standards and targets. Financial and non-financial parameters, used continuously by managers to identify operational deviation, comprise an organization's diagnostic control system. Predominantly, these systems are aimed at improving operational steermanship. The *interactive* use of MCS refer to a two-way line of communication, formally established and enabled. Formal processes and lines of communication comprise, if used interactively, an organization's interactive control system. Ultimately, these systems aim at formally facilitating value-creating dialog between organizational actors with different information or perspectives. The co-existence of a diagnostic use of MCS and an interactive use of MCS aims at creating balance throughout the process of *formulating and implementing business strategy*. The LOC framework is illustrated in Figure 1.

⁴ Simons (1995) defines five levers of control. However, the fifth lever, 'internal controls', is often considered a hygiene factor in mature firms and will not be included in our analysis.

Figure 1: Simons' (1995) Lever of Control Framework



Adapted from Simons (1995).

It is widely regarded that the LOC framework's core contribution relates to the notion of *balance* and the creation of *dynamic tensions* (e.g. Mundy, 2010; Kruis et al., 2016). Indeed Simons (1995, 24) explicitly writes in his introduction that "*implementing strategy requires a balance among the four levers of control*". The levers represent positive forces (belief systems and interactive control systems) and negative forces (boundary systems and diagnostic control systems), and through the simultaneous engagement of opposing forces, managers can achieve balance among the levers which in expectation facilitates dynamic tensions that are imperative to long-term organizational success. While the management of balance is the primary focus of the LOC framework, the notion of *balance* is vaguely defined which has prompted discussion among subsequent scholars. In example, Kruis et al. (2016, 27-28) argue that "[...] despite these frequent references to balance, Simons does not provide a definite notion of what balance is, nor how balance is reflected in the

control system.” The absent problematization of what is meant by *balance* reduces the nuance of the LOC system. Notwithstanding, the LOC framework remains highly regarded and continues to gain prominence among scholars (Martyn et al., 2016; Kruis et al., 2016).

2.1.2 Literature Exploring the Notion of Balance

The default understanding of balance suggests that by applying *opposing* forces, through *enabling* and *controlling* uses of MCS, *dynamic tensions* can be created (Simons, 1995). In turn, dynamic tensions are believed to be critical to develop *unique organizational capabilities* (Mundy, 2010) that ultimately are associated with *organizational performance* (Henri, 2006). This generic understanding of balance receives frequent reference. However, several scholars have argued that the concept remains partially ambiguous (e.g. Kruis et al., 2016). In particular, the notion of balance has been criticized for being vague. Although not always with explicit reference to the ambiguity of the notion of balance, there is a significant body of research evaluating the concept of balance from different perspectives and in different empirical settings. The broad interpretation of this literature is that the conceptual dimensions of the LOC framework are better understood with consideration of the environments in which they operate. Or in the words of Bougen (1989, 203), “*the emergence, roles and consequences of accounting systems can be best understood in the context of the [...] situations in which they operate*”.

We find that a series of scholars have studied *balance* from different perspectives. Several papers have concerned themselves with the *interplay and association* between different control levers, which is closely associated with the notion of balance (de Haas and Kleingeld, 1999; Emsley, 2001; Tuomela, 2005; Henri, 2006; Widener, 2007; Revellino and Mouritsen, 2009). This investigation is interesting because, as noted by Widener (2007, 757), “[t]he evidence suggests that there are *multiple inter-dependent and complementary relations among the control systems*.” Often, the balance between the levers is discussed in terms of *diagnostic* and *interactive* uses of MCS. This string of literature views the contrasting usages (diagnostic and interactive) of MCS as deeply connected concepts that must be understood in symbiosis. Emsley (2001, 24) explains, “[t]his point is important because, rather than viewing interactive and diagnostic control systems as *mutually exclusive, they were highly inter-related*.” An effect of this perspective is that managers cannot predict which levers are to be used when, or in what order (Revellino and Mouritsen, 2009). Continuous balance and, therefore, re-balancing is required, as the levers are deeply interlinked.

In slight contrast, there are a series of scholars who explore the notion of balance in terms of an *either-or* understanding of interactive and diagnostic uses of MCS (Vaivio, 1999; Abernethy and Brownell, 1999; Van Veen-Dirks and Wijn, 2002; Mikes, 2009; Østergren, 2009; Frow et al., 2010; Marginson et al., 2010; Rodrigue et al., 2013; Kastberg and Siverbo, 2013; Marginson et al., 2014). Typically, studies in this category assume a slightly more binary way of understanding balance. Among the papers are included empirical studies that evaluate contrasting uses of MCS (e.g. Mikes, 2009; Frow et al., 2010) and quantitative studies of how different uses of MCS associate to performance measures (Marginson et al., 2010). Often, the same system is evaluated from a diagnostic perspective and an interactive perspective, respectively. The results suggest that “[...] *management controls may acquire strategic significance both in an interactive and a diagnostic capacity*” (Mikes, 2009, 21). However, there also exists evidence that the diagnostic use of MCS is positively associated with short-termism, whereas an interactive use of MCS represents the opposite relationship (Marginson et al., 2010). These results help indicate that different uses of MCS might be appropriate in different organizational environments, and subject to different corporate strategies.

Other scholars have explored the notion of balance in the MCS subject to significant *strategic change* (Kloot, 1997; Marginson, 2002; Bruining et al., 2004; Kober et al., 2007). For instance, Marginson (2002) finds that *beliefs* were particularly important to drive the change agenda, and Bruining et al. (2004) explored how different uses of MCS were appropriate in different *stages* following management buy-outs. An implication of the latter study is the suggestion that sometimes managers can predict how to use different MCS at different stages, a view that contradicts the suggestion by Revellino and Mouritsen (2009). In addition to exploring how strategy affects the notion of balance, and how balance can be created subject to change, it is argued that MCS uses and strategy follow a two-directional relationship, “[t]hat is, *MCS shapes, and is shaped by, strategy*” Kober et al. (2007, 426).

In addition to the former conversations, a series of other suggestions about the notion of balance are brought forward. For instance, Kominis and Dudau (2012) suggests that ‘*common*’ diagnostics are associated with a higher level of interactive usage of MCS; Collier (2005) explores the notion of balance in terms of the association between *formal* and *informal* MCS elements⁵; and Janke et

⁵ Simons (1995) only addresses formal controls.

al. (2014) consider how the interactive use of MCS relates to balance during the financial *crisis* of 2008-2010. Furthermore, the association between *innovation* and balance in the MCS has been discussed by Bisbe and Otley (2004). Mundy (2010) considers factors that can reduce managers' ability to create dynamic tensions. The five factors considered can be summarized as *internal consistency, logical progression, dominance/historical tendency, suppression, relations between interactive processes and the remaining levers of control*. An interesting revelation of this paper is that the occasional suppression of levers can be helpful during change processes. A summary of the primary topics considered can be found in Table 1.

Table 1: A Summary of the Notion of Balance

Topic	Literature
<i>Interplay</i> and association between different levers	de Haas and Kleingeld, 1999; Emsley, 2001; Tuomela, 2005; Henri, 2006; Widener, 2007; Revellino and Mouritsen, 2009
<i>Either-or</i> understanding of diagnostic and interactive use of MCS	Vaivio, 1999; Abernethy and Brownell, 1999; Van Veen-Dirks and Wijn, 2002; Mikes, 2009; Østergren, 2009; Frow et al., 2010; Marginson et al., 2010; Rodrigue et al., 2013; Kastberg and Siverbo, 2013; Marginson et al., 2014
Strategic <i>change</i> and balance	Kloot, 1997; Marginson, 2002; Bruining et al., 2004; Kober et al., 2007

2.1.3 Discussion of the Control Levers and the Notion of Balance

The LOC framework and the notion of balance have received much attention. Scholars have considered the notion of balance from different perspectives, including as an association between different levers, the appropriateness of either a diagnostic or interactive usage, and the association between balance, strategy, and strategic change. Occasionally, the studies result in consistent results (Bruining et al., 2004; Henri, 2006), and other times in contrasting results (Bruining et al., 2004; Revellino and Mouritsen, 2009). The literature applies a series of research methods (e.g. single-case study, comparative case study, and survey-based study) although the most common research method is a version of the case study. On a stand-alone basis, the literature gives a mature impression. Yet, as we consider the literature in context of trying to understand the interplay

between MCS and organizational paradoxes, we make two observations where the literature can be further developed.

First, we agree with the suggestion of previous scholars that the LOC framework's critical notion of *balance* remains ambiguous. The importance of the concept of *balance* in the LOC framework is undisputed. Indeed, Simons (1995, 23) introduces his book by stating early on that “[i]mplementing strategy effectively requires a balance among the four levers of control”. However, several scholars have criticized the LOC framework for insufficiently elaborating on what is meant by *balance*. For instance, Kruis et al. (2016, 27-28) suggests that “[...] despite these frequent references to balance, Simons does not provide a definite notion of what balance is, nor how balance is reflected in the control system”. While subsequent scholars have elaborated on a series of ways to understand balance, we maintain that the notion of balance remains ambiguous and deserves further attention.

Second, through our literary review, we identify an *absence* of studies exploring balance in *paradoxical* settings in the management accounting literature. Indeed, different contingencies are explored, but the association between organizational paradoxes and the notion of balance has yet to be considered. Paradoxical settings are interesting because, in contrast to non-paradoxical settings, where tensions can be resolved, paradoxical tensions must be managed (Smith and Lewis, 2011). We suspect that the relationship between paradoxes and balance can reveal new insights on how MCS work. In consequence, we want to advance our understanding of what a paradox is, and, equally important, what a paradox is not. In the upcoming part of this section, we introduce the paradox literature.

2.2 Paradox Theory

In the first part of this section, we noticed two shortcomings of the management accounting literature on the LOC framework and the notion of balance. First, the notion of balance itself remains ambiguous. Second, studies that explore balance in a paradoxical setting are absent. In an attempt to address these concerns, we will introduce the paradox literature.

Indeed, a trend in both academia and industry is the shift towards a paradox-way of thinking, or a theory of paradox. Put very simply, early organizational theory attempted to answer the question “is A or B more effective?” Then came contingency theory which asked, “under what conditions are A or B more effective?” Today, a theory of paradox is evolving and brings forward the question

“how can organizations and their managers effectively engage A and B simultaneously?” (Smith and Lewis, 2011, 395). Naturally, a critical element of the paradox literature is the understanding of what a paradox is, and, equally important, what a paradox is not. A paradox, often illustrated through a yin and yang symbol, naturally relates to notions of balance. In consequence, the paradox literature represents a promise to add further nuance to how the notion of balance can be understood.

Paradox theory is of growing interest for several reasons, including the suggestion that companies increasingly try to achieve multiple goals in response to an ever-faster changing world, a sentiment that matches our empirical setting. Paradox theory remains a nascent field of research in a management accounting context, and therefore requires an introduction with help from other closely related terms and concepts. We argue that paradox theory stems from the idea of balancing exploration and exploitation, which has subsequently been referred to as organizational ambidexterity. Paradox theory takes a comprehensive approach to organizational ambidexterity and argues that ambidexterity can concern *not only* the tension between exploration and exploitation, but other concepts as well. Before we introduce the paradox literature, we must gather an understanding of the theoretical concepts on which paradox theory is based.

2.2.1 Exploration, Exploitation, and Organizational Ambidexterity

To understand the paradox literature, one must consider the concepts exploration, exploitation, and organizational ambidexterity. Originally, the concepts exploration and exploitation were established in the fields of economics and behavioral economics (Radner and Rothschild, 1975; Hey, 1982). March (1991, 71) is often regarded among the first researchers to consider in an organizational context “*the relations between the exploration of new possibilities and the exploitation of old certainties*”. Since then, a multitude of organization and management scholars have studied this concept, and today exploration-exploitation is one of the most well-researched organizational tensions.⁶ Gupta et al. (2006) have reviewed a series of articles that examine how to best balance exploration and exploitation. Their research shows that (i) there is broad consensus on the importance of balancing the competing factors exploration and exploitation, and (ii) there exists strong support for the view that “ambidexterity” is the appropriate way to achieve balance.

⁶ March (1991), who introduced the exploration-exploitation tension to organizational science, has more than 20,000 citations on Google Scholar. By comparison, Fama and French (1993), has 22,000 citations on Google Scholar.

Ambidexterity is defined by the Oxford dictionary as the “*ability to use the right and left hands equally well*”⁷. In this context, ambidexterity refers to the organizational ability of doing two things simultaneously or pursuing two goals at the same time. In contrast, *punctuated equilibrium* refers to a state in which exploration and exploitation are pursued cyclically to maintain balance; or in the words of Gupta et al. (2006, 694), “*cycling through periods of exploration and exploitation [...] [rather] than a simultaneous pursuit of the two*”. Gupta et al. (2006) explicitly discuss exploration and exploitation and argue that ambidexterity is a means of achieving balance between the two competing forces. Organizational ambidexterity as such, however, has evolved to become an established term in organizational theory. Raisch et al. (2009, 685) argue that “*organizational ambidexterity has emerged as a new research paradigm in organization theory*”. In contrast to Gupta et al. (2006), Raisch et al. (2009) treat the importance of organizational ambidexterity as a given factor, meaning that there is no debate on whether organizations should strive towards achieving organizational ambidexterity. Instead, they are interested in understanding how to best achieve organizational ambidexterity. An understanding of exploration, exploitation, and organizational ambidexterity is included in the theoretical foundation on which the paradox literature relies.

2.2.2 Paradox Theory

Smith and Lewis (2011) seek to establish a theory of paradox that aims at understanding how to best manage paradoxes. They do so by conducting a rigorous review of what they consider to be paradox literature, a process during which they define broad categories of paradoxical tensions based on previous research. In contrast to the two former literary areas reviewed, concerning exploration, exploitation, and organizational ambidexterity, Smith and Lewis (2011) do *not* limit their analysis to the specific tension comprised of exploration and exploitation. Instead, they consider a range of tension categories that each can be combined into different types of paradoxes.

First, to understand how to manage a paradox, we must understand what a paradox is and, equally important, what a paradox is not. Several terms are frequently used to explain organizational tensions, including ‘dilemma’, ‘dialect’, ‘paradox’, ‘tension’ and ‘dynamic tension’. The paradox literature does not specifically address or define a ‘non-paradoxical tension’. However, there are clear distinctions between ‘dialects’, ‘dilemmas’ and ‘paradoxes’, which are related terms. A

⁷ <https://en.oxforddictionaries.com/definition/ambidexterity>

dialect is defined as “*contradictory elements (thesis and antithesis) resolved through integration (synthesis)*” (Smith and Lewis, 2011, 387). In expectation, the synthesis of a dialect will over time confront new opposition which in turn requires new synthesis. In other words, a dialect is a tension that is temporarily resolved through resolution, or synthesis, between the two elements, into a third alternative. Critically, a dialect is resolved, not managed. A dilemma consists of “*competing choices, each with advantages and disadvantages*” (Smith and Lewis, 2011, 387). The resolution of a dilemma occurs through the selection of an available alternative that is not flawless. A classical dilemma in an organizational context would be to outsource versus build in-house, each of which alternatives offer a series of advantages and disadvantages. In contrast to a dialect, a dilemma is not resolved through synthesis. Rather, an imperfect ‘either or’ choice must be made. Like a dialect, a dilemma is not managed, it is resolved. In contrast to the former, a paradox contains two elements that are “*contradictory yet interrelated*” and that “*exist simultaneously and persist over time*” (Smith and Lewis, 2011, 387). Each element in a paradox is logical in isolation, but “*irrational, inconsistent, and absurd when juxtaposed*” (Smith and Lewis, 2011, 387). The most important characteristic of a paradox is that it *cannot* be resolved, and there are no possible ‘either or’ choices available. Instead, a paradox must be *managed* through the appropriate *balancing* of the two competing forces. An appreciation of the differences between a paradox, a dilemma, and a dialect is critical to develop a nuanced understanding of the paradox literature.

In complement to the distinction clarified above, let’s consider the notion of *tension* and *dynamic tension*. The notion of a *tension* is largely undefined and is applied in several contexts. Oxford Dictionary defines a tension as “*the state of being stretched tight*”, or “*mental or emotional strain*”.⁸ While these definitions do not help bring clarity to the subject for discussion, they help us understand that the underlying nature of the word tension is *not positive*. This helps highlight the critical characteristic of a *dynamic tension*, which is described as an *asset* for an organization’s ability to develop unique capabilities (e.g. Mundy, 2010). In other words, while the word *tension* has negative associations, the concept of *dynamic tensions* is a positive concept in the management accounting literature.

As argued in former parts of this section, the oldest and arguably most well-documented example of a paradox is exploration-exploitation, which in turn has been referred to as organizational

⁸ <https://en.oxforddictionaries.com/definition/tension>

ambidexterity by several scholars. In contrast, the paradox theory identifies *several* types of paradoxical tensions. Smith and Lewis (2011) review a sample of 360 articles that focus on organizational paradoxes. While the papers in question cover many different organizational phenomena and many different levels of analysis, this review “*highlights the lack of conceptual and theoretical coherence*” (Smith and Lewis, 2011, 382). Based on their review, the researchers organize previously investigated paradoxical tensions into four generalizable categories of paradoxes; *learning*, *organizing*, *performing*, and *belonging*. The first paradoxical tension, *learning*, concerns knowledge and the acquisition of knowledge, through change, renewal and innovation, and efforts to build upon (and occasionally destroy) the past in order to create the future. The concept of exploration, as introduced in the former articles, would fall into this category. The second paradoxical tension, *organizing*, concerns processes and structures, and the fostering of collaboration and competition, empowerment and direction, and control and flexibility in order to achieve a desired outcome. The third paradoxical tension, *performing*, concerns goals and performance strategies, including the prospective plurality of strategies that fosters competing goals from multiple stakeholders seeking divergent success. The concept of exploitation, as introduced earlier, would fall into this category. The fourth paradoxical tension, *belonging*, concerns organizational identity and interpersonal relationships. This tension is often driven by complexity and plurality; and it can arise between the individual and the collective. According to Smith and Lewis (2011), paradoxes can arise both within each tension category and at the intersection between two categories of paradoxical tensions. Paradoxes within a tension arise if there are competing demands that fall within the same category of paradoxical tensions. This might include the paradox that arises if different shareholders have different performance demands (performing category), and the company feels obligated to satisfy both perspectives.⁹ Paradoxes that arise at the intersection between multiple tension categories arise when there are competing demands that fall into different categories of paradoxical tensions. One example is the paradox of aligning focus on short-term performance (performance category) with focus on innovation to ensure future performance (learning category). The ultimate definition of a paradox is “*contradictory yet interrelated elements that exist simultaneously and persist over time*” (Smith

⁹ An example of such a paradox might arise in an organization like Tesla Motors, which on the one hand is a for-profit company with financial obligations towards its shareholders, and on the other hand has an outspoken mission to “accelerate the world’s transition to sustainable energy”; two forces within the “performing” tension category that theoretically can present paradoxical tensions to Tesla Motors. Source: <https://www.tesla.com/about>.

and Lewis, 2011, 382). In other words, a paradox arises when one ideally wants to achieve multiple goals, but the two goals stand in opposition. A summary of the identified types of paradoxical tensions is represented in Figure 2.

Figure 2: Categorization of Paradoxical Tensions

Learning::Belonging Conflict between the need for adaptation and change and the desire to retain an ordered sense of self and purpose. (a)	Learning Efforts to adjust, renew, change, and innovate foster tensions between building upon and destroying the past to create the future. (b)	Learning::Organizing Organizational routines and capabilities seek stability, clarity, focus, and efficiency while also enabling dynamic, flexible, and agile outcomes. (c)
Belonging Identity fosters tensions between the individual and the collective and between competing values, roles, and membership. (d)	Belonging::Organizing Tensions between the individual and the aggregate, individuality vs collective action. (f) Learning::Performing Building capabilities for the future while ensuring success in the present. (e)	Organizing Structuring and leading foster collaboration and competition, empowerment and direction, an control and flexibility. (g)
Performing::Belonging Clash between identification and goals as actors negotiate individual identities with social and occupational demands. (h)	Performing Plurality fosters multiple and competing goal as stakeholders seek divergent organizational success. (i)	Performing::Organizing Interplay between means and ends, employee vs. customer demands, high commitment vs. high performance. (j)

Adapted from Smith and Lewis (2011).

- (a) e.g. Fiol, 2002; Ibarra, 1999; O'Mahony and Bechky, 2006
- (b) e.g. March, 1991; Senge, 1990; Weick and Quinn, 1999
- (c) e.g. Eisenhardt and Martin, 2000; Teece and Pisano, 1994
- (d) e.g. Badaracco, 1998; Brewer, 1991; Huy, 2002; Markus and Kitayama, 1991; Pratt and Foreman, 2000
- (e) e.g. Andriopoulos and Lewis, 2009; Dweck, 2006; Tushman and O'Reilly, 1996
- (f) e.g. Murnighan and Conlon, 1991; Smith and Berg, 1987
- (g) e.g. Adler et al., 1999; Denison et al., 1995; Flynn and Chatman, 2001; Ghemawat and Costa, 1993; Luschner and Lewis, 2008; Siggelkow and Levinthal, 2003
- (h) e.g. Dukerich et al., 2002; Kreiner et al., 2006
- (i) e.g. Denis et al., 2007; Donaldson and Preston, 1995; Jarzabkowski and Sillince, 2007; Margolis and Walsh, 2003
- (j) e.g. Eisenstat et al., 2008; Gittell, 2004; Kaplan and Norton, 1996

2.2.3 Discussion and Summary of Paradox Theory

Thus far, we have developed an understanding of what a paradox is, and what a paradox is not. To a large degree, we argue, the paradox literature is closely related to the ambidexterity literature. Several ambidexterity scholars (e.g. Miller et al., 2006; Taylor and Greve, 2006; Beckman, 2006; Perretti and Negro, 2006; Siggelkow and Rivkin, 2006; Lavie and Rosenkopf, 2006; Wadhwa and Kotha, 2006) recognize and explain the value of being able to balance and manage competing demands (often illustrated through the competing demands of exploiting and exploring). The paradox literature agrees in this regard, although it develops thoughts of more than one type or category of paradoxes (illustrated by Smith and Lewis' (2011) framework for categorizing different types of paradoxical tensions). Furthermore, the ambidexterity literature suggests that balance between competing demands can be achieved through multiple organizational strategies, mainly *ambidexterity* and *punctuated equilibrium* (e.g. Miller et al., 2006; Taylor and Greve, 2006; Beckman, 2006; Perretti and Negro, 2006; Siggelkow and Rivkin, 2006; Lavie and Rosenkopf, 2006; Wadhwa and Kotha, 2006). In contrast, the paradox literature rejects the view that punctuated equilibrium is a desired strategy for achieving ambidexterity. This is a critical element of the paradox literature. It represents the view that simultaneous engagement of competing demands is the managerial solution to paradoxical tensions. Furthermore, we have established that a paradox can contain different tension types (e.g. learning and performing), thus creating different types of paradoxes that represent different challenges. Smith and Lewis (2011, 382) define a paradox as “*contradictory yet interrelated elements that exist simultaneously and persist over time*”. While a paradox is certainly an organizational tension, it is a quite specific kind of organizational tension, which is not to be confused with other types of non-paradoxical tensions. Importantly, a paradox is dissimilar to related concepts like dilemmas and dialects. We note that the paradox literature currently resides in the management domain, and that there is a need for management accounting technical support to help managers design, structure, or use their MCS when facing paradoxes. Furthermore, we note that the link between the paradox literature and the management accounting literature is weak.

There exists a broad and mature body of literature on the LOC framework and the notion of balance. The notion of balance is understood differently by different scholars, including as (a) an interplay and association between different levers, (b) a relationship between diagnostic and interactive use of MCS, or (c) as a concept that relates to strategic change. However, several scholars have

continued to argue that the concept of balance remains partly ambiguous (e.g. Kruis et al., 2016). Our paper supports this testimony. Furthermore, through our review of the LOC literature, we identify that the notion of balance has yet to be understood in the context of organizational paradoxes. As a response to this disparity, we set out to explore how balance can be understood in paradoxical contexts. To do so, we have introduced paradox theory, which will support our analytical journey. A paradox is defined as “*contradictory yet interrelated elements (dualities) that exist simultaneously and persist over time*” (Smith and Lewis, 2011, 387). Furthermore, it is critical to understand that paradoxes are made up of elements that “*seem logical when considered in isolation, but irrational, inconsistent, and absurd when juxtaposed*” (Smith and Lewis, 2011, 387). Paradoxes are rare, but they are on the rise. Accordingly, the demand for clarity on how MCS work subject to the presences of organizational paradoxes increases. This paper responds to this demand.

3 Method

Next, we discuss our data sources, the data collection process, and the data analysis process.

3.1 Research Design and Data Collection

Our analysis of the role of MCS in managing organizational paradoxes draws on empirical data primarily gathered via interviews that were collected and analyzed following methods recommended by Eisenhardt (1989). Several types of data were collected including formal and informal interviews, managerial documents, on-site observations, and publicly available information. Our primary data source is 21 individual interviews that were conducted using a semi-structured approach (see Appendix A for details). The semi-structured interview form was considered appropriate given the restricted research period that reduced our ability to ensure the opportunity to conduct follow-up interviews on all occasions (Bernard, 1988). Two of the interviews were conducted in an informal setting (one lunch and one joint commute from the research site). The remaining interviews were formal. The informal interviews were a valuable opportunity to explore thoughts in a casual setting that enabled behind the scenes observations, off-the-record statements, as well as observations of the general organizational environment. All formal semi-structured interviews were conducted in Swedish, and all but one were recorded and subsequently transcribed. The average length of these interview was 72 minutes. Consequently, all quotes in our paper are translated into English by the researchers. Furthermore, the interviews took place with two researchers present in all but three occasions. The informal interviews were

documented through written notes, which were in turn debriefed and discussed among the researchers. Five interviewees were interviewed multiple times to ensure the appropriate understanding of critical observations and to clarify possible misinterpretations following the first interview. Finally, we do not consider our process to be subject to access problems. In addition to data collected through formal and informal semi-structured interviews, we gained access to a strategic presentation provided to us by Senior Vice President of Corporate Control. Additionally, we reviewed all annual reports covering the period 2007-2017, as well as the sustainability reports for 2015-2017.¹⁰ The purpose of this review was to evaluate the development of the language used to describe the strategic agenda, and to develop an understanding of the formal strategy.

3.2 Data Analysis

Given our ambition to engage in theory building based on a case study, we gather inspiration for the data analysis process from Eisenhardt (1989, 549), who proclaims that “[t]heory developed from case study research is likely to have important strengths like novelty [and] testability [...]”. As we highly regard the need for novelty to our research area, we rely on an empirical case study as our primary data source. Moreover, a recognized strength of this approach is its independence from prior literature or past empirical observation, characteristics which make this approach “*particularly well-suited to new research*” (Eisenhardt, 1989, 532). Specifically, we applied an iterative process in our data analysis where we involved the identification of emergent themes and interpretation of data from several angles to evaluate possible directions in which to further develop the literature. All data was mapped against, and considered in terms of, the empirical timeline of events that we observed. Publicly available information, including annual reports, was used to ensure an alternative perspective through which we considered the data gathered in interviews. In doing so, we reduced the risk of losing our critical perspective through which we understood the statements and observations gathered in the interviews. Primarily, the implication of this became evident in discussions between the researchers concerning the ‘modular system’, the ‘target costing practice’ and the ‘customer-first strategy’ at TruckFirm.

Lukka and Vinari (2014) gave inspiration to our treatment of theory, which in turn interacted with the collected data. Through the classification of our theoretical domain and our method theory, respectively, we managed to maintain boundaries between the research area to which we intend to

¹⁰ Sustainability reports were not published prior to 2015.

contribute, and the research area which enables our contribution. Furthermore, we applied the method theory to the domain theory to develop our theoretical lens, which in turn helped us analyze the empirical account. Subsequently, the empirical analysis, conducted through our theoretical lens, helped us in our final dialog with the domain literature. In symbiosis, our contributions are built upon the dialog between the theoretical domain, method theory, and empirical account.

4 Empirics

In this section, we present our empirical findings and discuss them in terms of our theoretical understanding based on the LOC literature and paradox theory.

4.1 Introduction to TruckFirm

TruckFirm was founded in the late 19th century and following a series of mergers throughout the 20th century, TruckFirm emerged as one of the leading manufacturers of internal combustion engines¹¹ (“ICE”) and ICE-based trucks and busses. In 2017, TruckFirm’s turnover amounted to almost SEK 120 billion¹². A distinguishing factor of TruckFirm is its achievement of “*delivering black numbers since 1934*”, as Head of Treasury explains. Notwithstanding its ongoing success, TruckFirm finds itself at the center of an industry disruption, which presents both lethal challenges and unique opportunities.

In the late 1990s and early 2000s, the movement to fight global warming caught fire. Since its inception, this movement has been focused on the effects of using fossil fuels in transportation, and the movement has been represented in both politics (e.g. Al Gore ran for president in 2000, largely based on a climate-change platform¹³), the startup community (e.g. Tesla Motors was founded in 2003¹⁴), as well as in leading multinationals (e.g. TruckFirm’s first move towards electrification was initiated in 2007, according to Chief Engineer of Electromobility and Powertrain Development). Interestingly, the pressure to find alternative ways to power transportation has multiple sources. In addition to the climate change driver, there is a growing business case for alternative power sources, primarily sun-powered electrification. First, diesel, the dominant fuel for heavy road transportation, is expensive, and the price of sun-powered electrification is declining

¹¹ Internal combustion engines, or ICEs, refer to, in simplified terms, engines that run on fossil fuels.

¹² Annual report, 2017.

¹³ <http://edition.cnn.com/ALLPOLITICS/stories/1999/03/09/president.2000/transcript.gore>.

¹⁴ https://www.tesla.com/en_EU/about.

rapidly.¹⁵ Second, ICEs are extremely complicated mechanically which implies high service and maintenance costs. In contrast, the electric motor has significantly fewer mechanical components, which means that service and operating costs will go down. As Chief Engineer of Electromobility and Powertrain Development explains:

“A Euro6 truck¹⁶, with all its parts, is amazingly complex. It needs service intervals with oil and filters, which an electrical power train [i.e. electrical motor] does not. They [electrical power trains] will not enter workshops. We have made analyses on the expected reduction of maintenance and repair needs of the power train: they [the maintenance costs] are 80% lower.”

In addition to the pressure to *electrify* transportation, two additional trends drive an industry-wide disruption. First, the prospect of *self-driving* vehicles is expected to reduce labor costs and costs related to accidents. Second, vehicle *connectivity* will improve logistics and route efficiency, which further reduces costs. The combination of electrification, self-driving capabilities, and connectivity is a strong business case that poses lethal challenges to the transportation sector. And at the heart of this major industrial transformation lie the manufacturers, TruckFirm included.

While this industry shift is naturally related to technological innovation, which poses its own challenges to large organizations, technology is not the only explanatory variable. Inevitably, a series of organizational challenges will represent a risk of organizational imbalance. Indeed, our empirical account identifies many organizational tensions that pose challenges of varying size and nature. However, the unique proposition of our empirical account relates to the *paradox* that TruckFirm faces. When asked, almost all interviewees agree that TruckFirm’s revenue from ICE related products will shift from approximately 100 percent to approximately zero percent of total revenues within a few decades. In other words, in the absence of the successful development of new product lines, TruckFirm is heading towards certain bankruptcy. In consequence to this reality, the organization must (A) ensure continued success in the existing, profitable, and still growing business, for as long as possible, while simultaneously (B) facilitate the shift towards the new core technology as quickly as possible. As the Chief Engineer of Electromobility and Powertrain Development points out, “[...] we cannot kill the cash cow too soon because then we have no funding.” The paradox lies therein that the two goals, A and B, *contradict* each other, yet must be

¹⁵ <https://qz.com/1264033/all-the-human-flaws-and-biases-that-prevent-you-from-managing-money-properly>.

¹⁶ A Euro6 truck refers to TruckFirm’s most recently launched series of ICE trucks.

pursued *simultaneously*. Without B, there is no future. And without A, there is no present. TruckFirm needs both.

We want to understand the association between TruckFirm's MCS and the *paradox* the organization faces. To do so, we must first gather a solid understanding of TruckFirm's current MCS and the historical context in which it was developed.

4.2 TruckFirm's Historical MCS

Our empirical account of TruckFirm's MCS affirms its significant role in delivering profits since 1934. In fact, our inquiry concludes that the historical design and *use* of TruckFirm's MCS elegantly combines *positive* and *negative* forces in a way that approaches text-book perfection (Simons, 1995). Through this endeavor, *unique organizational capabilities* have been developed, as is predicted by the LOC literature (Mundy, 2010, 515):

“The simultaneous use of MCS to direct and to empower requires purposeful intervention by senior managers in order to create the conditions in which productive tensions can emerge. Balancing these competing demands represents a unique capability because each manager faces an individual set of choices in how they use the levers of control to manage inherent organisational conflicts.”

TruckFirm argues consistently that their successful operations are driven by their core values, which until 2016 were *customer first*, *respect for the individual*, and *quality*. By and large, the empirics confirm this testimony. Furthermore, we can identify that the customer-first principle has been influential in the development of other control system elements, including the so-called *modular system* and *target costing practice*, to which we return later in this section. In addition to a strong customer-first culture, we identify a strong sense of pride among employees. On several occasions, interviewees expressed confidence on behalf of TruckFirm. E.g. Senior Advisor to CEO noted, *“‘Leader in the development towards sustainable transport solution.’ I guess that says something about the ambition to be somewhere in the top,”*; and Chief Engineer of Electromobility and Powertrain Development suggested that, *“No one in the world does [work with continuous improvements] better than TruckFirm.”* This sense of pride can be understood in terms of the long average duration of employment at TruckFirm. As Head of Powertrain Research joked during an informal meeting, *“If you have worked at TruckFirm for 15 years, you are a beginner”*.

In addition to representing a control element, the organizational *beliefs* have shown a remarkable ability to influence the development of other control system elements. The modular system¹⁷ represents critical *boundaries* at TruckFirm. The system can be traced back to 1939 when TruckFirm unveiled the first engine with standardized components. Subsequently, the modular control principle gained momentum and in 1980 TruckFirm introduced its first entirely modularized product range, the GPRT series (Annual report 2016, 2). To this day, the modular system remains very influential. In fact, several engineers argue that TruckFirm has developed a “modular DNA” that has become deeply embedded in the organization. Chief Engineer of Electromobility and Powertrain Development explains:

“Very, very much [of how we work] comes from the [modular] DNA. Our building blocks, or way of building things, our way of thinking about how to build things.”

Most importantly, however, the modular system is argued to provide TruckFirm with “*in-built flexibility that gives [TruckFirm] economies of scale and resource efficiency*” (Annual report 2016, 17). The confidence in the benefits of the modular system is so significant that TruckFirm lists it as a *competitive advantage* in their annual report. The rationale for developing the modular system involves the customer-first perspective. Increasingly, customers expressed an interest in customizing their vehicles, which put pressure on developing necessary flexibility that would allow customers to customize their vehicles freely. In part due to this customer need, the modular system was introduced to ensure flexibility and customizability. Furthermore, it is argued that the modular system works as a boundary mechanism to provide direction. In practical terms, engineers have been free to innovate if – and *only* if – the changes fit into the modular system. By innovating within the modular system, TruckFirm has ensured that all innovations are immediately applicable across all vehicles, which ensures cost effectiveness. In addition, all innovations are immediately available to all customers and across all vehicles, which allows for immediate economies of scale. According to some interviewees, this results in a longer development phase, but also assures lower future costs and quicker set-up time for customers. In this way, the customer-first principle can guide innovation. Admittedly, this results in a system where *predictable, iterative* innovation is preferred to *uncertain, radical* innovation. However, since every innovation is compatible with all

¹⁷ The modular system refers to a principle that all mechanical components are to be compatible with each other with standardized interfaces (Annual report, 2016).

platforms, it is argued that the impact of each iteration becomes significant. This *balanced* use of encouraging innovation and providing predefined goals seems to be consistent with the LOC literature (Simons, 1995, 41):

*“Effective control of strategy requires **both** the freedom to innovate and the assurance that individuals are working productively toward predefined goals. [Bold added].”*

In addition to driving the development of the modular system, the customer-first principle has been influential on the design and use of TruckFirm’s cost control system. Senior Vice President of Corporate Control explains:

“We try to work, to the largest degree possible, with target costing, which means that you start with the customer and move backwards in the value chain to identify that for this product to be sellable on the market, the engine can cost a maximum of SEK 120,000 or the driver cabin can cost a maximum of SEK 90,000, etc.”

TruckFirm’s target costing system is developed to ensure the consideration of customer needs and the customers’ cost-benefit. The use of this system therefore requires frequent interaction with customers. Head of Powertrain Research explains an important target costing principle at TruckFirm:

“[...] traditionally we have said that if the customer does not make savings in excess of the additional cost within six months, we will not pursue the project.”

It is important to recognize the way in which this process take place. Contrary to what one might expect, the customers do not explicitly place a value on vehicle components or functions. Instead, the on-going dialog attempts to capture customers’ *needs* in terms of vehicle *characteristics*. Senior Advisor to CEO explains:

“[We don’t try to] figure out what products the customer wants. Instead, we understand what characteristics of the product they would like to have improved. Then we try to figure out how that characteristic can be improved in different ways.”

Interestingly, the target costing practice is in part enabled through the modular system. Since TruckFirm vehicles are built on the same modular platform, the deduction of components across models is comparably simple, which in turn makes it easier to break down the value of each

component. This is an example of how TruckFirm's customer-first principle, modular system and target costing practice are integrated and work with large synergies to promote the customer first strategy.

TruckFirm's formal *interactions* seem to rely on a common understanding of how TruckFirm chooses to innovate. In short, the idea is that small, iterative innovations will yield a competitive advantage over time. The formal mode of communication can be described as follows: Lower level employees engage with customers to develop an understanding of customer needs. Based on the identified needs, a series of project proposals are developed. In turn, middle managers review the projects and a decision to advance certain projects is made. Next, top management engages in the decision of which projects are best aligned with the current strategic direction. If deemed promising, a project is assigned a budget for further development. Having received formal approval from top-management, the project travels back down the organization and is pursued by the appropriate department. The process of fostering innovation from the bottom-up is associated with historical success, a sentiment which we can confirm through multiple sources.

While we recognize the historically *balanced usage* of TruckFirm's MCS, it is important to remember the circumstances under which it was designed and operated. For decades TruckFirm's business model, and the core technology on which the products rely, have been stable. In such an environment the pursuit of an *iterative* innovation mode seems to have been appropriate. And as a result, TruckFirm's MCS is associated with the creation of *unique organizational capabilities* that are capable of both exploration and exploitation (March, 1991). However, today, TruckFirm, faces a substantially different environment. Technical Project Manager of E-Mobility exemplifies:

"Let's for instance consider the development of battery technology; it is subject to much faster iterations; new things come much faster than what we are used to."

The combination of electrification, self-driving technology, and connectivity disrupts the core technologies on which the business model has relied for decades. Because of the changing organizational environment, TruckFirm is faced with a *paradox*, which demands changes in the *design* and *use* of its MCS.

4.3 The Rise of an Organizational Paradox

TruckFirm's historical MCS *usage* is associated with substantial success. Today, the rapidly changing organizational environment, driven by the promise of technological advancement, has destabilized the organization and impaired the *balance* in the MCS.

It is hard to define precisely when TruckFirm first encountered the paradox it faced today. Yet while the real-life development of the paradox cannot be evaluated accurately, we can assume knowledge of the formal changes that are associated with the paradox. In 2016, TruckFirm's board appointed a new CEO and subsequently introduced a new vision statement: *"TruckFirm's vision is to drive the shift towards a sustainable transport system, creating a world of mobility that is better for business, society and the environment."*¹⁸ That year, the word count in TruckFirm's annual report of "sustainability" and "electrification" increased to 190 and 17, respectively, up from 11 and 3 just two years earlier (see Appendix B). Clearly, this indicates a recognition of the paradox in question. In our interpretation, the new corporate agenda, that embeds a *paradox*, was introduced in the period leading up to 2016, where the appointment of a new CEO and the crafting of a new vision statement are the most distinct symbols. By and far, the interviews confirm this view.

We observe that the new vision statement has stimulated the motivation of engineers working on the development of new technology¹⁹. Indeed, many engineers have been waiting for TruckFirm to accelerate the pace at which it pursues a path towards sustainability. However, there are signs that engineers working on advancing ICE-related technology are partly questioning the new focus. Senior Advisor to CEO explains:

"I would rather say that we should not communicate [the new vision] so much that the people who work with [ICE-based products] start feeling, 'Am I working with the wrong things? Is there a future here?' Who wants to work with combustion engines if combustion engines are going right down the drain? Nobody will be interested. Nobody is going to want to work with [combustion engines]. And how can we then ensure that we have the best combustion engines in 25 years?"

¹⁸ Annual report, 2016

¹⁹ By "new technology" we refer to technology relevant to promote the new vision statement, including but not limited to electrification associated technology and self-driving related technology.

This is an example of where TruckFirm seems to be confronted with a *paradox*. On the one hand, the vision statement must address the desired future to stimulate organizational search, which it now does. On the other hand, a critical function of the vision statement remains to encourage and motivate the *entire* work force, which today it clearly does not. This type of paradox is consistent with the “belonging paradox”, as described in the paradox theory (Smith and Lewis, 2011, 383):

“Identity fosters tensions between the individual and the collective and between competing values, roles, and memberships.”

In contrast to employee motivation, the ‘modular DNA’ seems to have been unaffected by the formal changes to the vision statement. However, the change agenda seems to have brought forward reflections on whether the modular system itself is appropriate to facilitate the new corporate strategy. This issue is subject to ongoing discussions on several organizational levels. Chief Engineer of Vehicle Propulsion lays out the alternatives that are open to TruckFirm:

“[Either] we seek financing to commercialize small series based on new technology that break with our traditions, or we break with the modular system to test new markets and new customer perceptions.”

Several interviewees agreed that the modular system might have to become subject to adaptations, although exactly how this was to be done remains unclear. Some argued in favor of a separation of an old and a new modular system, while others suggested that the appropriate development was a moderate change within the existing system. The reason this decision seems problematic is that it must *balance* contradicting needs. It is beyond doubt that the current set-up works very well to produce ICE-based vehicles subject to iterative innovations. However, to innovate radically within the modular system is problematic. Technical Project Manager of E-Mobility explains:

“We always want full specs; we always want modularization and the ability to sell everything immediately. I think we need to become better at taking this somehow step-wise. Still build upon the modularization in some way, but don’t ruin it [...]. With new technology, perhaps some volatility must be accepted; be a little out-of-line [referring to the modular system], and then come back in again. I think that’s where things went wrong with the hybrid from the beginning. [We tried to] standardize a component that perhaps should not have been standardized.”

When asked to further elaborate on the effects of the ‘forced standardization’ of the hybrid vehicle, he continued:

“It took too long time to develop [the hybrid]. And the resources; it became too expensive for this vehicle. The final vehicle became too expensive. The customer wouldn’t want that product. Other companies have already produced electric busses. And our hybrid is coming out when they are releasing fully electric busses because they have focused only on one specific type of electric buss. That is the problem with the modular system, [...] it takes longer time, and with new technology maybe one should be brave and [be more focused on some products] and come faster to the market.”

This statement helps reveal the mismatch between the organizational intention to change, and how the MCS structure partially prohibits that change. The modular system seems to represent a *competitive advantage* in the traditional business landscape, yet it partially prohibits necessary disruptive innovation to facilitate the new corporate agenda. This observed paradox is in uniform with the “organizing paradox”, as described in the paradox theory (Smith and Lewis, 2011, 383):

“Structuring and leading foster collaboration and competition, empowerment and direction, and control and flexibility.”

The situation confronting TruckFirm is often contrasted to a situation in which the new core technology is developed from scratch. Technical Project Manager of E-Mobility explains, *“They [Tesla Motors] start from scratch. It is always far easier to build something from scratch rather than trying to fit the process with what our organization, and our structures, and our modular system looks like.”* This observation highlights the notion that the threat facing incumbents during industry disruption is *not* necessarily about the technology itself. Indeed, a Project Director familiar with the matter suggests that *“[m]aking an electric engine is not remotely as complicated as producing an internal combustion engine.”* Therefore, it seems that the challenge lies therein to ensure a *balanced* development in the MCS that can facilitate *both* the old and the new demands.

We identify similar discussions related to the target costing practice. The *diagnostic* use of this system, reinforced by the customer-first principle, continues to ensure profitability in the 99 percent of revenue coming from ICE vehicles. However, the degree to which innovation would be possible

within this system is debated vigorously. Several interviewees suggested that the diagnostic practices prohibit innovation. Senior Advisor to CEO explains:

“Short-term evaluation stands in the way of long-term risk-taking. If the long-term oriented risk-taking is evaluated after short-term based improvement principle, then it will never happen.”

The subject of whether certain processes prohibit innovation is a recurring theme in our empirical account. The dependence of the existing revenue stream on the target costing practice, and the simultaneous negative association between the target costing practice and the new corporate agenda represents a paradox. While the characteristics of this paradox are similar to the former paradox, in the modular system, we identify a subtle difference. The modular system is associated with how the business process is to be organized, and the target costing practice is associated with profitability and performance. In consequence, this paradox is in harmony with the “performing paradox”, as described in the paradox theory (Smith and Lewis, 2011, 383):

“Plurality fosters multiple and competing goal as stakeholders seek divergent organizational success.”

Through our continued effort to understand this affair, an interested theme emerged. As we studied the increased importance of revenues from financial services and leases, it became clear that the uncertain second-hand value of the new hybrid vehicle was a challenge. Interestingly, the current practice of the commercial operations team²⁰ is to allow for the uncertainty in the second-hand value to be reflected in the leasing cost of those vehicles, resulting in a higher leasing price. Senior Vice President of Corporate Control elaborates on how this practice is likely to have evolved:

“I think this is very, very relevant. I’m [trying to] see if I have an answer. The leasing example is very interesting because we have clearly said that Financial Services should be a stand-alone business that should be [profitable], so with that mandate they cannot do anything other than set an economically rational price. That’s their duty.”

Interestingly, we heard from several independent sources that the customers did not think that the economics of the new technology were good enough today, and that customer consequently

²⁰ The commercial operations team sets the leasing prices, according to Senior Vice President of Corporate Control.

declined the opportunity to switch to hybrid vehicles. Senior Vice President of Corporate Control thinks aloud on this topic:

“Are we ‘pricing ourselves out of the market’ with the hybrid? I do [...] believe that the customers are very price sensitive.”

By our interpretation, the customer-first orientation has captured the feedback that hybrids do not represent an attractive cost-benefit offering. In fact, we find indications that the perception that hybrids were unattractive was taken into consideration in capital allocation decisions. This observation is interesting considering the R&D budget’s continued emphasis on traditional technology. Specifically, Chief Engineer of Electromobility and Powertrain Development confirms that only SEK 500 million of a total R&D budget of SEK 7 billion is allocated towards new core technology. While the reflection of second-hand value uncertainty into the leasing price makes perfect sense on a stand-alone basis, it becomes strange when considering the new strategic direction. Vice President of Financial Services indeed recognizes that, *“What’s bad about [the increased risk premium of the hybrid’s leasing cost] is that you don’t get a competitive offer to the customer.”*

In addition to the formerly described challenges of innovating within the target costing practice and modular system, we observe concerns regarding the organizational *interactions*. Historically, TruckFirm has been driven by a philosophy that innovation is best done in a gradual and iterative manner. This has developed a comparably slow mode of interactions as there has been acceptance that innovation can and may take time. Chief Engineer of Vehicle Propulsion explains:

“I don’t think in any way that we must be first out with new technology or with the technology that will be dominant in 30, 40 years. Absolutely not. Maybe it is even the case that we [at TruckFirm] usually say that we place a certain pride in not being first with new technology but to be best instead.”

However, the slow mode of innovation can also be interpreted as a prohibitor of necessary, rapid innovation. Indeed, we identify a fear that organizational *inertia* threatens TruckFirm. Head of Powertrain Research explains:

“Nothing keeps me up at night anymore. I am past that. I have chosen to work because I enjoy it. But I identify organizational inertia as a possible obstacle of success. The inertia is in part related

to an understanding, in part to a willingness to understand, and in part a [the willingness to] act. [...] There is an enormous inertia [at TruckFirm]. This inertia worries me.”

The systems for formal interaction that are in place are not geared towards radical innovation. Instead, we identify organizational interactions that facilitate small, on-going, and iterative innovation across the value chain. In parts, the interactions are rooted in the modular system that requires any innovation to be approved across multiple departments or units to ensure compliance with the modular system. The value of this interactive control function is proven in an environment where *iterative* change is desired. However, as pressure to innovate at a *faster* pace intensifies, this control mechanism can limit the rate of innovation. Head of Powertrain Research elaborates:

“[Electrification projects] don’t fit into the normal way of estimating. So, when we are doing an electrification project, we cannot [prove profitability] in the same way. And then the project will stop, and it will be questioned, and it will end up in the ‘nice to have’ batch. This is a classic in disruptive technology. One must allow for [...] an understatement of the project’s value to let it through [the system]. And again, we are a company that does small steps, where each step has a proven return on investment. We have a profit model that is based on the customer’s savings. And I think that is wonderful, it’s a great idea. But now it doesn’t fit. We cannot see that the customer is making savings. And therefore, we ‘slide’ every time and then we lose momentum [...]. There is also frustration [...] in the organization. Now we have gone with this [...] and then it wasn’t possible to calculate profitability and then we lose energy. It is connected to the way we calculate at the company and the general inertia. And this is where people like me feel, ‘now Nokia [...] flies by’. These are signs that we are [fat and happy] and that we don’t manage to assume a different perspective on what needs to be done.”

The problem with this *interactive* usage of the MCS, and the other *usages* discussed in the former parts of this section, must be understood considering the *paradoxical* strategy that TruckFirm pursues: On the one hand, the business that drives 99 percent of revenues have a proven communication structure that everyone is familiar with. This control system *usage* is sensible as it ensures the continued success in the dominant business line. On the other hand, the communication form *reduces* the pace at which radical innovation can take place, which prevents the fulfilment of the new corporate agenda. These elements represent a sound logic in isolation, but clear

irrationality when juxtaposed. This paradox is in consent with the “learning paradox”, as described in the paradox theory (Smith and Lewis, 2011, 383):

“Efforts to adjust, renew, change, and innovate foster tensions between building upon and destroying the past to create the future.”

Our empirical account concludes that, historically, TruckFirm has successfully engaged *opposing* forces in the MCS to produce *dynamic tensions* and *unique organizational capabilities*. However, the current disruptive business environment challenges the MCS and seems to partially impair its *balance*. We are concentrated on further advancing the notion of *balance*, as inaugurated by the LOC literature (e.g. Simons, 1995), in the unique context of an organizational *paradox*. The analytical journey towards this goal will be proceeded in the next section.

5 Analysis

The LOC literature heavily relies on the notion of *balance* (Simons, 1995). It is suggested that the presence of *balance* will enable the creation of *dynamic tensions*, which in turn are believed to facilitate the development of *unique organizational capabilities* (Mundy, 2010). However, several scholars have suggested that the LOC framework and notion of *balance* remains ambiguous (e.g. Tessier and Otley, 2012). In response, many have pursued a path towards increased nuance and clarity on the notion of *balance* (e.g. Kruis et al., 2016). However, the existing studies are limited to empirical contexts that are *non-paradoxical*. As *paradoxes* are on the rise (Smith and Lewis, 2011), we want to shift the focus towards understanding the notion of *balance* in the presence of *organizational paradoxes*. Our empirical account, which represents a *paradoxical* context, enables us to define a set of propositions regarding the way in which the notion of *balance* relates to the presence of *organizational paradoxes*.

5.1 Proposition 1: Balance Within the Control Levers

Our paper supports the existing literature with regards to the notion of *balance*, and how *balance* can be created in the presence of *paradoxical tensions*. Through our empirical exploration, we identify several *paradoxical tensions* that help us further develop the notion of *balance*.

The newly introduced *vision statement* was considered imperative to ignite the new corporate agenda as it motivates organizational search for new technology. However, an unintended effect was the reduced motivation of engineers working on ICE-related products, which still represent 99

percent of revenues. These contradicting elements exist simultaneously and represent a paradoxical tension. As pointed out by Senior Advisor to CEO, “[...] *the people who work with [ICE-based products] start feeling, ‘Am I working with the wrong things? Is there a future here?’ Who wants to work with combustion engines if combustion engines are going right down the drain? Nobody will be interested. Nobody is going to want to work with [combustion engines].*” The unnuanced vision statement seems to impair the *balance within* the belief system. Instead of motivating all employees to engage in organizational search, as is the suggested outcome (Simons, 1995), some employees are left demotivated.

A similar effect is found in the organizational *boundaries*. The *modular system* is considered so valuable that it is listed as a competitive advantage in the annual report. In line with this suggestion, our empirical account confirms that the modular system continues to play a critical role in facilitating the successful pursuit of ICE-related products. However, we also find empirical support that the modular system simultaneously can reduce the pace of development and increase the development costs of projects related to promoting the new vision. We are reminded of Technical Project Manager of E-mobility’s explanation, “[i]t took too long time to develop [the hybrid]. And the resources; it became too expensive for this vehicle. The final vehicle became too expensive. The customers wouldn’t want that product. Other companies have already produced electric busses. And our hybrid is coming out when they are releasing fully electric busses because they have focused only on one specific type of electric buss. That is the problem with the modular system, [...] it takes longer time, and with new technology maybe one should be brave and [be more focused on some products] and come faster to the market [...]” The dominance of the modular systems impairs the *balance within* the boundaries, as the outcome is not increased clarity and direction, as is suggested in the LOC literature (Simons, 1995). Instead, this *imbalance* reduces the ability of employees to successfully pursue projects aligned with the new strategic direction.

Further evidence supporting this phenomenon is identified in the *diagnostic* use of the MCS. TruckFirm has a long-standing tradition of facilitating its customer-first strategy through the diagnostic use of a *target costing system*. Head of Powertrain Research explains an important target costing principle at TruckFirm, “[...] *traditionally we have said that if the customer does not make savings in excess of the additional cost within six months, we will not pursue the project.*” While this practice is argued to be valuable in ensuring continued profitability of ICE-related products,

this “*way of estimating*” is also found to act as a prohibitor of projects aligned with the new agenda. Head of Powertrain Research explains, “[*electrification projects*] don’t fit into the normal way of estimating. So, when we are doing an electrification project, we cannot [*prove profitability*] in the same way. And then the project will stop, and it will be questioned, and it will end up in the ‘nice to have’ batch. This is a classic in disruptive technology. One must allow for [...] an understatement of the project’s value to let it through [*the system*].” It appears that the target costing practice represents an *imbalance* in the diagnostic control system. As with the *imbalance* of the modular system (boundary system), the *imbalance* in the target costing practice (diagnostic control system) reduces the organizations ability to implement the strategic domain.

These empirical examples help establish that our empirical account represents an *absence* of balance *within* the control levers. However, the notion of balance *within* the control levers is not consistent with the traditional understanding of *balance* in the LOC literature. If one were to summarize the LOC framework in few words, it would likely include the notion that “*implementing strategy requires a balance **among** the four levers of control [bold added]*” (Simons, 1995, 24). ‘Balance *among*’, or ‘balance *between*’²¹, the control levers is the dominant interpretation of the notion of *balance* in the LOC literature. The idea is that each lever produces a *force*, which when combined with *other opposing forces*, produced by other levers, can create *balance*. This phenomenon is referred to as ‘balance *between*’ or ‘balance *among*’ the levers. It seems that our empirical account identifies a notion of *balance* that is *inconsistent* with the traditional interpretation of the concept. Indeed, several scholars have suggested that the LOC framework and notion of *balance* remains ambiguously defined and have pursued a path towards conceptual clarity (e.g. Tessier and Otley, 2012). However, recent publications have criticized that subsequent scholars continue to “*leave the notion of balance among the levers implicit*” (Kruis et al., 2016, 28). This paper argues that the LOC literature has a well-defined understanding of what *balance* means in a *non-paradoxical* setting. However, Simons (1995) and subsequent scholars don’t consider organizational environments that are *paradoxical*. Our paper wants to shift the focus towards the notion of *balance* in the presence of *paradoxical tensions*.

With this empirical endorsement, we seek to establishment a new way of understanding the notion of *balance*. Our new interpretation of balance – *balance within* – can be further explored from a

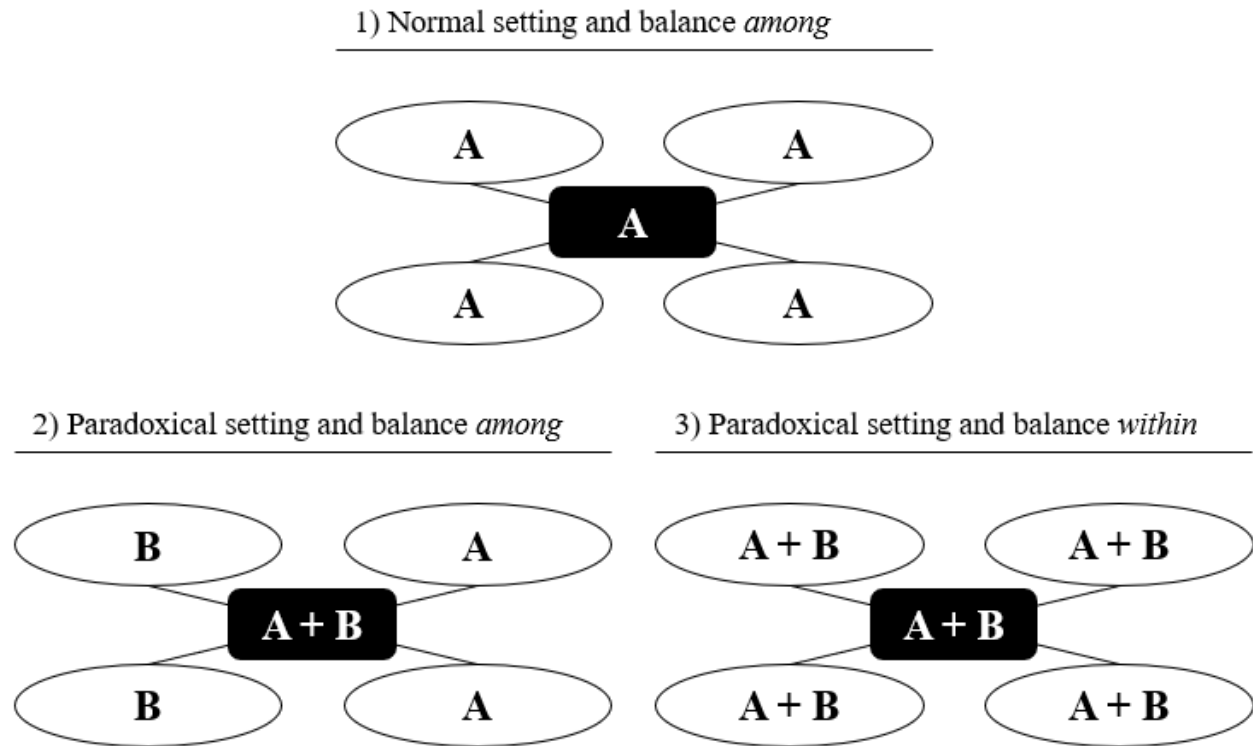
²¹ The term ‘balance among’ and ‘balance between’ are used interchangeably in the LOC literature.

theoretical standpoint to support our empirical findings. When contrasting the notion of *balance*, as used in the original work by Simons (1995), with how a *paradox* relates to the notion of *balance*, interesting variations are revealed. Simons (1995, 18) clearly and repeatedly argues that the framework's "*collective power lies in the tension generated by each lever*". In contrast, Smith and Lewis (2011, 387) suggest that paradoxes are "*opposites that exist within a unified whole*". It seems that Simons (1995) considers balance *between* several systems, whereas the paradox literature is focus on what occurs 'within a unified whole'. Further evidence supporting this contrast can be found. Simons (1995, 67) suggest that "[dynamic] tension[s] [are] created by the pairing of beliefs and boundaries". Contrastingly, Smith and Lewis (2011, 393) argue that "*tensions [arise] within the system's strategies, structures, rules, processes, and identities*". If these 'structures' and 'processes' can be assumed to represent association to the control levers, we suggest that a nuanced reading of the LOC literature, through a *paradox lens*, implies that *balance within* a lever might be necessary to manage *paradoxes*. Why? Because *paradoxical tensions* seem to arise "*within the system's strategies [and] structures.*" Indeed, we are reminded that a primary argument of the paradox literature is that paradox elements are "*contradictory yet interrelated*", exist simultaneously "***within** a unified whole [bold added]*", and will "*persist over time*" (Smith and Lewis, 2011, 387). This wording further emphasizes the idea that paradoxes arise 'within a unified whole' which might suggest that Simons' (1995) notion of balance *between* the control levers is not an appropriate strategy to manage *paradoxes*. The bottom line is this: balance *between* the levers is to Simons (1995) what Romeo is to Juliet, whereas balance *within* a 'unified whole' is the critical argument of the paradox literature. Therefore, when considering, through a *paradox lens*, the creation of *balance* in the presence of *organizational paradoxes*, it is imperative to understand the prospective importance of achieving not only balance *between* the levers, but also balance *within* the levers. Our empirical identification of the absence of balance *within* the levers receives theoretical endorsement through contrasts found in how the LOC literature and the paradox literature discuss the notion of *balance*. We suggest, from an *empirical* and *theoretical* point of view, that the notion of *balance within* the control levers is *associated* with *paradoxes*.

As we seek to understand the notion of *balance* in the presence of paradoxes, it is critical to highlight the *difference* between a *paradoxical* and *non-paradoxical* organizational setting. To further advance this thought, we will engage a hypothetical example that aims of clarifying what specifically is meant by 'balance *within* the levers' as opposed to 'balance *among* the levers' in the

context of *paradoxical* and *non-paradoxical* settings, respectively. The hypothetical example is comprised of three scenarios, which are illustrated in Figure 3.

Figure 3: Balance *between* and balance *within* the control levers



The difference between a *paradoxical* setting and a *non-paradoxical* setting is often captured in the business strategy. Simply put, a *non-paradoxical* setting involves the pursuit of a *singular* strategy comprised of one goal, “A”. In contrast, a *paradoxical* setting represents a situation where a firm pursues a *dualistic* strategy where the goal contains two *contrasting* elements, “A and B”. It is critical to understand that for a situation to be paradoxical, the elements of the strategy must be “*contradictory yet interrelated*”, exist simultaneously “*within a unified whole*”, and will “*persist over time*” (Smith and Lewis, 2011, 387). Consider the first scenario (1) in which a company (“NormFirm”) has a corporate strategy (A). Subject to suggestions by Simons (1995), NormFirm should engage in the simultaneous pursuit of (i) motivating employees to stimulate organizational search, and (ii) limiting opportunistic behavior and creating clear direction for the organizational

search. This is best done by allowing the left-hand side levers to engage in facilitating ‘i’ and enabling the right-hand side levers to ensure ‘ii’. In doing so, NormFirm would create balance *between* the levers, and allow for the development of *unique organizational capabilities* (Mundy, 2010). This scenario represents a situation where each lever addresses the corporate strategy, A. Notwithstanding, NormFirm is still exposed to normal exploration-exploitation trade-offs (March, 1991). However, such tensions reside within one corporate strategy. Next, consider a scenario (2) in which a company (“ParaFirm”) has a corporate strategy (A+B) that represents two opposing ideas, A and B, that follow the requirements for a paradox. By the same practice used by NormFirm, ParaFirm might be tempted to facilitate B by engaging the left-hand side levers and to ensure A by engaging the right-hand side levers. In doing so, ParaFirm might be considered to follow the suggestion of creating balance *between* the control levers because the concept of balance *between* the levers does not explicitly prohibit this action. In this scenario, each lever does *not* address *both* elements of the corporate strategy. This represents an *imbalance within* the control levers and is similar to our empirical account. Finally, consider a scenario (3) in which the same firm, ParaFirm, instead engages all four levers in the facilitation of the dual corporate strategy, A+B. The left-hand side levers are engaged to ensure motivation for the search of appropriate solutions related to *both* A and B, and the right-hand side levers are engaged in the creation of direction for *both* A and B. Now, balance *within* the levers is ensured as each lever addresses *both* strategic elements. This scenario, where a paradox is embedded in the corporate strategy of the company, and all levers address both strategic elements, represents an illustration of what is meant by the creation of *balance within* the levers. If a paradox consists of *contradicting elements*, we argue that *balance within* the levers is created when *each* lever addresses *both* paradox elements at the same time.

Proposition 1: Balance within the control levers is created when each control lever addresses all paradoxical elements of the corporate strategy.

Our first proposition develops a new way of understanding the concept of *balance*. This view is closely associated with the presence of *organizational paradoxical*. We suggest that there is a logical reason for why this notion of *balance* is previously unexplored. Simons (1995), and subsequent LOC scholars, assume the automatic presence of balance *within* the control levers because they consider empirical contexts which are *non-paradoxical*. In a non-paradoxical setting, with a singular corporate goal, A, the balance *within* the control levers can be automatically

assumed. Therefore, no additional consideration of balance *within* is necessary. This scenario was outlined in the first scenario in our hypothetical example. However, the presence of *paradoxes* that arise because of a dual corporate strategy, A and B, invalidate the assumption of balance *within* the levers. The understanding of *balance* in a paradoxical setting is underdeveloped, and consequently the notion of balance *within* the levers has not been explored by previous scholars. Having established how we define balance *within*, we want to further explore the new notion of balance *within* the control levers in our empirical setting that represents a *paradox*.

5.2 Proposition 2: Balance Between Requires Balance Within

In the first part of our analysis, we identified an empirical *imbalance within* several control levers. Instead of creating clarity and direction to the organizational search of pursuing electrification projects, the boundaries reduced the ability of employees to successfully pursue projects aligned with the new strategic direction. We learnt from Technical Project Manager of E-mobility that “*it took too long time to develop [the hybrid]. And the resources; it became too expensive for this vehicle. The final vehicle became too expensive.*” This unintended outcome of the modular system clearly represents an *imbalance* in the boundary system. Interestingly, while we observed high motivation to pursue projects aligned with the new organizational *beliefs*, the organizational boundaries do not create direction to the organizational search, as is intended by the LOC literature (Simons, 1995). This empirical observation helps us make several suggestions. First, it helps us identify the *absence* of balance *within* the control levers. However, this observation helped us develop a second insight regarding the ways in which *balance* works in the presence of *paradoxes*. Not only did the dominant modular system represent *imbalance* within the control lever. In addition, the *imbalanced boundaries* seem to *invalidate* the *beliefs’* function of stimulating organizational search instead of delivering clarity to that organizational search. This breaks the belief-boundary link of together delivering *opposing forces* (i.e. positive and negative forces), as is the intended outcome (Simons, 1995). In other words, we observe that *imbalance within* one lever (boundary system) can disrupt the balance *between* two levers (belief system and boundary system). It seems, therefore, that balance *within* the levers can be a *prerequisite* for balance *between* the levers.

The same effect is identified in the diagnostic control systems. In the first part of this section, we learnt that the target costing practice prohibited projects from being “*let through the system*”,

because the traditional “*way of estimating*” was incompatible with the risk profile of electrification projects. In consequence, the estimations painted a gloomy picture of the projects’ prospects, which ultimately resulted in the rejection of projects aligned with the corporate agenda. TruckFirm’s interactive control system is based on a series of formal meetings, typically beginning from the bottom-up, with subsequent direction from the top-down. This communication line represents the formal, iterative process through which TruckFirm tries to facilitate discussion and capture innovation. The interactive use of MCS is associated with the diagnostic use, represented by the target costing practice. Together, these two forces are supposed to help implement the strategic domain (Simons, 1995). However, we observed that the dominance of the target costing practice prohibited electrification projects, which were aligned with the new strategy. In other words, the *interactive* processes became *unable* to capture innovation because the *diagnostic controls* were enforced without *balance*. The dominant diagnostic use of MCS therefore seems to have *broken* the previously functioning link between the *diagnostic* and *interactive* systems. In other words, we identify another example of how the *imbalance within* one lever (diagnostic control system) can impair the balance *between* two levers (diagnostic control system and interactive control system).

The first proposition, derived through a combination of empirical and theoretical synthesis, suggests how *balance within* the control levers is created in the presence of *organizational paradoxes*. Based on additional empirical exploration of *paradoxes* and *balance*, we can further build upon the endorsement of the first proposition. We suggest that in the presence of *organizational paradoxical* tensions, *balance within* the levers can be a *prerequisite* for the creation of *balance between* the levers.

Proposition 2: In the presence of organizational paradoxes, balance within the levers can be a prerequisite for balance between the levers.

This suggestion is important as we *do not* abandon the idea that *balance between* the levers continues to serve as an important control principle in a paradoxical context. As with any organizational context, the *balance between* the control levers is important to create *dynamic tensions* and *unique organizational capabilities*. However, in the rare context of a *paradoxical* organizational environment, additional control principles come into play. First, *balance within* the levers is created only when each lever addresses all elements of a corporate strategy (proposition 1). Second, in the presence of *organizational paradoxes*, *balance within* the levers can be a

prerequisite for balance *between* the levers (proposition 2). Next, we further explore the traditional understanding of balance, i.e. *balance between* the levers, and how it relates to the paradoxes in our empirical account.

5.3 Proposition 3: The Danger of Reinforcing Balance Between the Levers

Proposition 1 develops an understanding for what is meant by balance *within* the control levers. Proposition 2 suggests that the *presence* of balance *within* the control levers can be a *prerequisite* for the ability of managers to create balance *between* the levers. In consequence, we suggest that the notion of balance *within* and balance *between* are complementary, meaning they can exist simultaneously. Indeed, this paper suggests that balance *within* levers and balance *between* the levers *should* exist synchronously. To further advance the understanding of how *paradoxes* associate to the notion of *balance*, we want to further explore the association between *paradoxes* and the traditional understanding of balance, i.e. balance *between* the levers.

Simons (1995) suggests that the dual usage of opposing forces will promote the development of *dynamic tensions*. Balance between the levers is created if the opposing forces appropriately *balance* each other; a proposition that has the support of multiple scholars (e.g. Henri, 2006). However, the LOC literature mostly looks at the upside of the usage of opposing forces. It is true that occasionally, the temporary deviation from this principle is suggested. For instance, Mundy (2010) suggests that it might be useful to suppress certain levers temporarily to ensure stability during organizational change. However, the normal understanding of balance *between* the levers is that balance should be *reinforced* continuously by applying opposing forces created by different levers. We seek to further explore the relationship between *paradoxes* and the suggestion that balance *between* the levers should be *reinforced* through the usage of opposing forces.

TruckFirm has a long history of creating balance *between* the levers by continuously *reinforcing* the usage of *opposing forces* created by different control levers. As we explored the increasing importance of the Financial Services division at TruckFirm, an interesting side-effect to this practice was identified. Subject to the strategy of pursuing growth in revenues from financial service, a distinct responsibility to ensure a set of growth and profitability targets in the Financial Services department was created. Senior Vice President of Corporate Control explains, “[...] we have clearly said that Financial Services should be a stand-alone business that should be [profitable] [...].” This mandate did not reflect the new vision and offered no special consideration

of different product series. This example offers further evidence of the presence of *imbalance within* a lever. However, we now seek to explore an understanding of balance *between* the levers in the presence of *paradoxes*. The mandate to be profitable and ensure growth helps us exemplify how the usage of opposing forces can work. The diagnostic use of financial targets represents a clear mandate to the financial services. This force, expressed in restricting terms, is supposed to off-set the stimulating forces ensured by the left-hand side levers. However, instead of leading to the desired outcome of dynamic tensions, the reinforcement of the diagnostic controls (i.e. the profitability mandate) had unintended consequences. Because of the profitability mandate, the financial services team assumed a practice that allowed leasing prices to reflect the uncertain second-hand value of hybrid vehicles. Because there is less historical transaction data on hybrid vehicles, there is risk attached to the second-hand value. Consequently, a lower second-hand value is used in the financial models. This naturally requires an appreciation of the leasing price to off-set the expected lower re-sell value. Senior Vice President of Corporate Control rightfully reflects on why this should be the expected outcome, “[...] *with that mandate [to be profitable] they cannot do anything other than set an economically rational price. That’s their duty.*” However, this practice triggers a negative spiral of effects that works counter to the strategic direction. In short, the unattractive leasing price of the hybrid results in lacking interest from the customers. Indeed, Vice President of Financial Services noted that, “[w]hat’s bad about [the increased risk premium of the hybrid’s leasing cost] is that you don’t get a competitive offer to the customer.” Provided the strong customer-first orientation, the feedback from customers that the hybrid is *not* an attractive offer is circled back into the organization. Throughout our series of interviews, we repeatedly observed the perception that TruckFirm’s customers were unwilling to switch to greener solutions. In fact, this perception was referred to on several occasions as an explanation for why the R&D budget for new technology is so low. Specifically, only SEK 500 million of a total R&D budget of SEK 7 billion are allocated towards new technology.

This empirical observation represents a situation where an attempt to reinforce balance *between* the levers, through the engagement of *opposing* forces, created a negative chain-effect that resulted in an outcome counter to the corporate strategy. In other words, the attempt to *increase one force* produced by *one levers* (diagnostic control system) in order to produce a stronger balance *between* the levers, can result in *counterproductive* outcomes. This implies that not only is balance *within* the levers a *prerequisite* for balance *between* the levers, as suggested in proposition 2, but the

attempt to create balance *between* the levers by *reinforcing* the effect of one lever can lead to *unintended* and *counterproductive* effects.

Proposition 3: In the absence of balance within the levers, the reinforcement of opposing forces to restore or strengthen the balance between the control levers can lead to unintended and counterproductive outcomes.

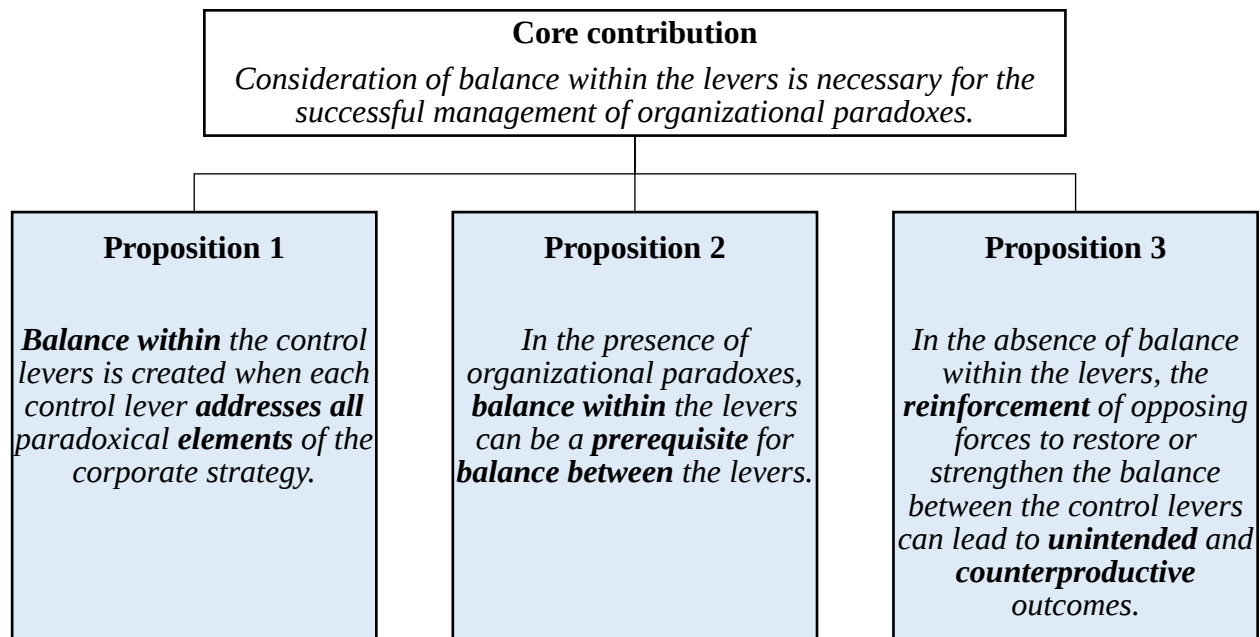
5.4 Balance Within the Levers

Our empirical account has helped us to develop three distinct propositions regarding the way in which the notion of *balance* can be understood in the presence of *organizational paradoxes*. We have developed an understanding for how balance *within* the levers is created (proposition 1); we have suggested that balance *within* the levers can be a *prerequisite* for balance *between* the levers (proposition 2); and we have suggested that the *reinforcement* of balance *between* the levers can be *counterproductive* in the *absence* of balance *within* the levers (proposition 3). The sum of these propositions supports our finding. The existing LOC literature is deeply concerned with the notion of *balance*. As the existing literature primarily considers contexts that are *non-paradoxical*, it has left the assumption of balance *within* the levers implicit. Indeed, in a non-paradoxical setting, balance *within* the levers can be automatically assumed, as the corporate strategy does not embed a paradox. However, in a *paradoxical* setting, the notion of balance *within* the levers cannot be assumed to hold without further notice. Therefore, we suggest that consideration of balance within the levers is necessary for the successful management of organizational paradoxes.

Core contribution: Consideration of balance within the levers is necessary for the successful management of organizational paradoxes.

The need to consider and manage balance *within* the levers is the core contribution of this study. The three propositions are suggested to further expand and nuance this insight. Figure 4 summarizes our core contribution and the three supporting propositions.

Figure 4: Summary of Core Contribution and Propositions



6 Conclusion

This paper helps advance the ways in which the notion of *balance* in the MCS can be understood. Many prominent scholars have explored different ways of understanding the concept of *balance* (e.g. Bisbe and Otley, 2004; Collier, 2005; Henri, 2006; Widener, 2007; Mundy, 2010; Kominis and Dudau, 2012; Kruis et al., 2016). The LOC framework by Simons (1995) is regarded as a critical analytical tool for understanding the creation and management of balance, and several researchers have pointed out its increasing prominence (e.g. Martyn et al., 2016). However, it is also argued that the notion of balance remains ambiguous (e.g. Kruis et al., 2016). By and large, this paper affirms this testimony. This paper finds that prominent ways in which balance is treated in the prior literature include the notion of balance as (a) an interplay and association between different levers, (b) a relationship between diagnostic and interactive use of MCS, or (c) as a concept that relates to strategic change. Furthermore, a series of organizational settings and contextual factors are tested. However, we identify that the management accounting literature has yet to explore the notion of balance in the presence of *organizational paradoxes*. In response to the observations that (i) the notion of balance remains ambiguous, and (ii) the management accounting

literature lacks studies that explore balance in a paradoxical setting, this paper set out on an analytical journey to further advance the management accounting literature's understanding of the notion of *balance*.

The findings from the current study indicate that balance can be understood as a harmony that can arise both *between* the levers, but also *within* the levers. The most prominent understanding of balance relates to the original formulation by Simons (1995, 24), "*implementing strategy requires a balance **among** the four levers of control [bold added]*". Balance *among*, or balance *between*, the control levers is understood as a harmonious and continuous interplay between different levers and different uses of levers. However, balance *within* each lever is implicitly assumed and left unaddressed. Our paper promotes the view that this assumption cannot be made in the presence of organizational paradoxes. In consequent, we suggest that balance within the levers is necessary for the successful manage of organizational paradoxes.

Core contribution: Consideration of balance within the levers is necessary for the successful management of organizational paradoxes.

To support this argument, the current study contributes to extant literature by defining a series of propositions on how the concept of balance can be understood in the context of organizational paradoxes.

First, we establish a precision of what is meant by balance *within* the levers. A paradox contains elements that are "*contradictory yet interrelated*", "*exist simultaneously and persist over time*", and that are logical in isolation, but "*irrational, inconsistent, and absurd when juxtaposed*" (Smith and Lewis, 2011, 387). An organizational paradox arises following the pursuit to achieve two such elements, A and B. Balance within the levers is created when each lever addresses all paradoxical elements of a corporate strategy.

Proposition 1: Balance within the control levers is created when each control lever addresses all paradoxical elements of the corporate strategy.

Second, we find evidence that the notions of balance within and balance between are associated. Specifically, we suggest that the creation of balance between the control levers can require the presence of balance within the levers. This suggestion is important as we do not abandon the idea that balance between the levers continues to serve as an important control principle in a paradoxical

context. As in any organizational context, the balance between the control levers is important to create dynamic tensions and unique organizational capabilities. However, in the rare context of a paradoxical organizational environment, additional complexity is added. In consequence, balance within the levers can be a prerequisite for the creation of balance between the levers.

Proposition 2: In the presence of organizational paradoxes, balance within the levers can be a prerequisite for balance between the levers.

Third, the current study observes that the reinforcement of balance between the levers through the usage of opposing forces, which is advised by the LOC literature (Simons, 1995), is associated with risk in a paradoxical context. In other words, the attempt to increase one force produced by one lever to reinforce the balance between the levers, can result in counterproductive outcomes. This implies that not only is balance within the levers a prerequisite for balance between the levers, as suggested in proposition 2, but the attempt to create balance between the levers by reinforcing the effect of one lever can lead to unintended and counterproductive effects in a paradoxical setting.

Proposition 3: In the absence of balance within the levers, the reinforcement of opposing forces to restore or strengthen the balance between the control levers can lead to unintended and counterproductive outcomes.

Our paper contributes to the stream of research concerned with the LOC framework and the notion of balance. While previous studies have tested several associations in this field, the intersection between balance and paradoxes seems to be largely unexplored. Through our empirical exploration of a paradoxical context, we are able identify the need of managers to engage in the creation of balance *within* the levers. This finding helps increase the nuance with which the concept of balance can be understood and helps indicate the importance of balancing management control systems.

The current study is subject to several potential limitations. First, the use of a case study has several strengths including its applicability to explore complicated relations and engage in novel thoughts and new research (Eisenhardt, 1989), yet it comes with limitations that include *limited generalizability*. Second, the quantity of *data* and the *sample size* from which the data was gathered is limited, and the findings should therefore be treated with caution. Third, the study was conducted during a *limited period* by researchers with *limited experience*. Fourth, the analysis is based on a

company that is included in a larger conglomerate *portfolio*, and therefore observations concerning strategic matters that are likely influenced by the parent company deserve attentiveness.

This paper reveals a series of intriguing suggestions for further research. First, we focus on the notion of balance *within* the levers in a paradoxical setting. Our study reveals that the traditional understanding of balance *between* levers deserves attention in a paradox setting. Second, we propose the examination of the notion of balance *within* the levers in a *non-paradoxical* setting. Third, the paradoxes our empirical account covers are comprised of opposing elements that fall within the same category of paradoxical tensions (Smith and Lewis, 2011). We call for studies that evaluate the notion of balance in a context with paradoxes that are comprised of elements that fall into different paradox categories (e.g. learning-organizing). Fourth, we believe that there exists an interesting association between the paradoxical category laid out by Smith and Lewis (2011) and the levers of control (Simons, 1995). We suspect that the presumed association, *beliefs-belonging*, *boundaries-organizing*, *diagnostic-performing* and *interactive-learning*, presents the prospect of an interesting analytical process.

7 Appendix

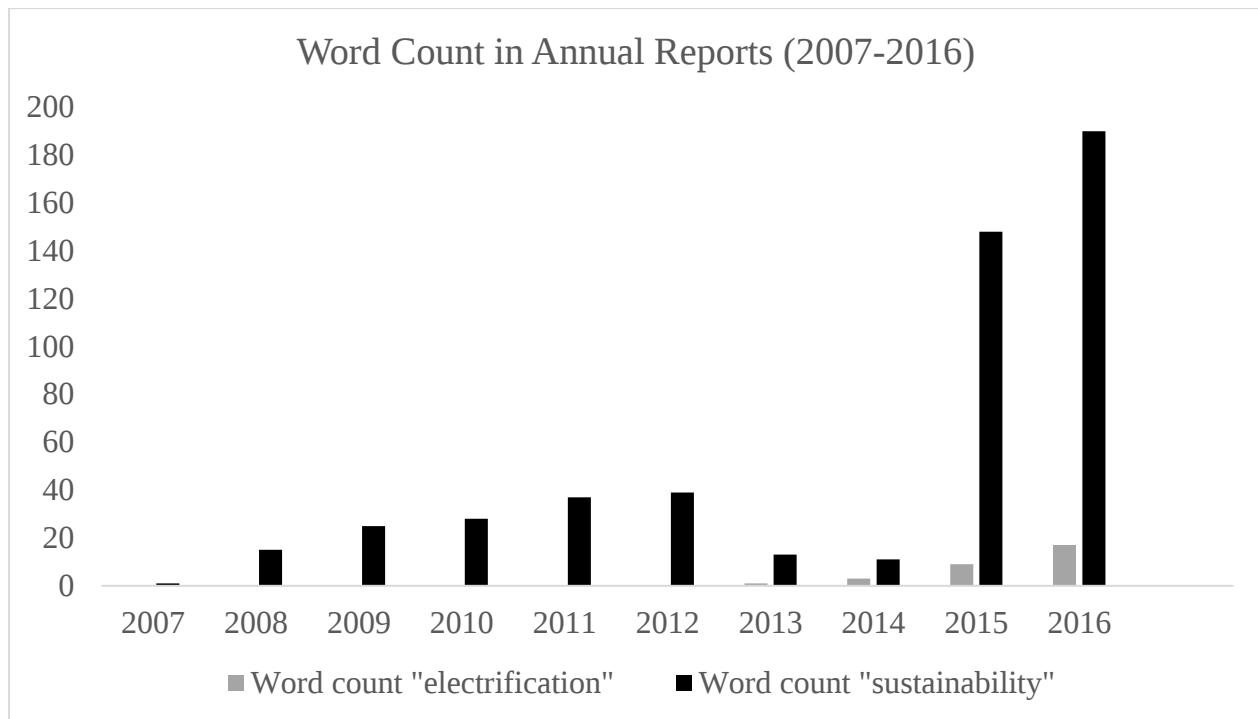
Appendix A: Interviews

Title	Date	Minutes
Senior Vice President of Corporate Control	2018-01-17	75
Chief Engineer of Electromobility and Powertrain Development	2018-01-25	85
Senior Manager, Research Office	2018-01-25	25
Head of Powertrain Research*	2018-01-25	50
Head of Powertrain Research	2018-02-02	90
Senior Advisor to CEO	2018-02-02	60
Vice President of Financial Services*	2018-02-02	35
Global Head of Treasury	2018-02-02	90
Chief Engineer of Electromobility and Powertrain Development	2018-02-02	85
Project Manager	2018-02-04	75
Business Analyst, Business Intelligence & Market Strategy	2018-02-06	120
Vice President of Financial Services	2018-02-07	90
Business Unit Coordinator, Financial Services	2018-02-09	90
Chief Engineer of Vehicle Propulsion	2018-02-09	90
Technical Project Manager of E-Mobility	2018-02-09	45
Senior Vice President of Corporate Control	2018-02-12	30
Senior Manager, Research Office	2018-04-27	60
Project Director [#]	2018-04-27	90
Head of Modularization, Technical Product Planning	2018-05-02	80
Graduate Trainee	2018-05-04	75
VP of Finance and Business Control at Sales and Marketing	2018-05-08	50

* *Informal interviews. Not recorded.*

[#] *Not recorded.*

Appendix B: Word Count in Annual Reports (2007-2016)



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