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Balanced Structures: Designing Organizations for Profitable Growth

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Abstract

Companies strive for profitable growth in their quest to create superior returns for their shareholders. Profitable growth requires an organizational design that pursues seemingly contradictory demands: mechanistic structures to ensure the efficient exploitation of existing capabilities, and organic structures to enable the exploration of new growth opportunities. Researchers have suggested a range of 'balanced' structural concepts to reconcile these conflicting requirements at the corporate level. The solutions include temporarily cycling through different structures (temporal separation), creating differentiated units (structural separation), and enabling employees to move back and forth between different structures (parallel structures). While theoretical concepts have been presented for balanced structures, much less is known about how organizations deploy and execute these solutions.

In this article, data from an inductive study of six leading Central European companies are used to explore the specific conditions under which different structural solutions were adopted, the strategies deployed to execute these solutions, and the learning outcomes that resulted from their implementation. The organizations observed in this study used the three balanced design options as complementary rather than mutually exclusive solutions. The solutions were deployed in different contexts and contributed to different learning outcomes. While the solutions all combined exploitation and exploration activities to some extent, each solution addressed different dimensions of these learning processes. The process model of balanced structural designs, presented in this article, provides insights into the structural solutions that may be most appropriate given the requirements of specific situations. Four general design rules are presented to support practitioners in the successful execution of balanced structures.

Introduction

Sustainable profitable growth is an important concern for all companies and one of the most critical challenges facing senior executives today. Empirical investigations show that surprisingly few established companies manage to achieve growth in both sales and profits over the longer term.[1] The pursuit of profitable growth implies the challenge of maintaining a balance between the exploitation of existing capabilities and the exploration of new possibilities.[2] Corporate leaders attempting to reconcile the two activities are confronted with a 'paradox of administration'.[3] Efficient exploitation of existing capabilities has been related to a mechanistic form of organization, relying on standardization, centralization and hierarchy, but such mechanistic structures have been found to hinder the forces of innovation and flexibility required for exploring new capabilities. Exploration may be better supported by organic structures with high levels of decentralization — but these structures, in turn, have been found to impede coordination and efficiency. There is, therefore, a fundamental organizational trade-off between mechanistic and organic structures that is difficult to resolve.[4]

According to the 'trade-off view,' organizations must choose between structures that [either] facilitate exploration [or] enable exploitation

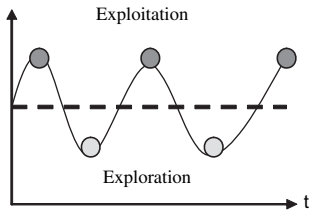
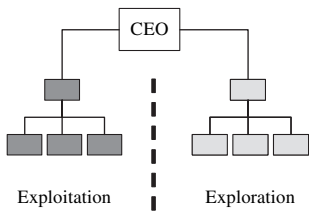
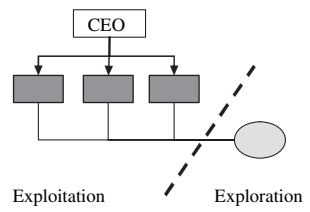
Prior management theories have claimed that organizational designs that simultaneously address exploitation and exploration may be impossible to achieve.[5] According to this 'trade-off view,' organizations must, in the end, choose between structures that facilitate exploration and those that enable exploitation.[6] In contrast, more recent studies have described a range of structural solutions their authors believe can reconcile exploitation and exploration's contradictory requirements at the corporate level.[7] The solutions presented by this 'balanced view' are based around one of three fundamental design options (see Table 1 for an overview): First, *temporal separation* suggests that companies should alternate between periods of decentralization to promote innovation, and periods of centralization to drive cost efficiencies. By switching between different corporate structures, exploitation and exploration are thus emphasized sequentially rather than simultaneously.[8] Second, researchers have suggested *structural separation* by creating different corporate level units to pursue either exploitation or exploration. Each unit is configured to the specific needs of its task: exploitation units have formal and mechanistic structures, while exploration units have flexible and adaptive structures.[9] Third, scholars have proposed *parallel structures* that allow employees to move back and forth between two types of structures, depending on their respective tasks: formal primary structures designed for routine tasks and to ensure efficient operations, and supplementary network structures that are flexible enough to support innovative activities.[10]

Although such theoretical concepts to address the dual requirements of exploitation and exploration have been presented, we echo Siggelkow and Levinthal in noting that much less is known about *how* organizations deploy and execute these solutions. How do organizations make use of different balanced structures in their pursuit of profitable growth? Further insights are needed about the specific contexts in which the different solutions are indicated, which factors contribute to their successful implementation, and what outcomes are likely to result from their use.

There is little prior research on the execution of balanced structural designs, and consequently little theory to guide our thinking. In taking this next step in organizational design research, we conducted an inductive study of six leading Central European companies (see Appendix 1 for an overview of the methodology). All six companies had realized profitable growth throughout the last decade and were thus promising targets from which to derive best practices. The study explored the settings in which the different solutions were adopted, the strategies deployed to execute these solutions, and the learning outcomes associated with their successful implementation.

The findings reveal that the three design options are complementary rather than mutually exclusive solutions. The type of balanced structure used varies according to the specific contextual

Table 1. Three Types of Balanced Design Solutions

Category	Description	Related Theoretical Concepts
Temporal Separation 	■ Organizations change back and forth between different corporate structures. ■ Decentralization is used to ignite innovation and change; centralization to increase coordination and efficiency. ■ Exploitation and exploration are emphasized *sequentially* rather than simultaneously.	■ Cycling (e.g., Cummings, 1995; Eccles & Nohria, 1992) ■ Sequencing (Siggelkow & Levinthal, 2003) ■ Vacillation (Nickerson & Zenger, 2002)
Structural Separation 	■ Organizations are divided into two (or more) separate units with different structures. ■ Flexible 'innovative units' explore new areas for growth; more formal 'operational units' ensure efficient operations in the existing business. ■ Exploitation and exploration are addressed by *different* employees and organizational units.	■ Ambidextrous organization (e.g., Duncan, 1976; O'Reilly & Tushman, 2004; Tushman & O'Reilly, 1997) ■ Plural form (Bradach, 1997) ■ Loosely coupled organization (Christensen, 1998; Levinthal, 1997)
Parallel Structures 	■ Organizations create supplemental network structures to complement the formal primary structure. ■ Employees switch between the two types of structures depending on their respective tasks. ■ Exploitation and exploration are addressed by the *same* employees, but in *different* structural environments.	■ Collateral organization (Zand, 1974) ■ Dualistic structures (Goldstein, 1985) ■ Hypertext organization (Nonaka & Takeuchi, 1995) ■ Parallel learning structures (Bushe & Shani, 1991; McDonough & Leifer, 1983; Stein & Kanter, 1980)

requirements and the learning objectives to be pursued. We show which structural solutions are most appropriate under which conditions, and derive a set of concrete design rules for the successful execution of these structures.

A process model of the balanced designs that emerged from the empirical data is presented in the next section, and the following sections consider the contexts, execution strategies and learning outcomes of each of the three design options. Finally, we discuss the study's implications for academic research and managerial practice.

Process model of balanced designs

During the interviews and workshops conducted with executives from the participating firms, the balancing of exploitation and exploration was frequently cited as a key challenge in managing for profitable growth. Nestlé's chairman and CEO Peter Brabeck stated:

> *We have to deploy past experiences while staying focused on the current execution and, at the same time, pursue new ideas to shape the future. The greatest challenge for top managers is to enable the organization to achieve the right balance between these objectives.*

This article investigates how the companies we observed deployed three balanced designs — temporal separation, structural separation, and parallel structures — to enable this dual focus. Table 2 provides some background data on the six companies analysed and the structural solutions they have deployed during the last decade. We present the general framework that emerged from our data first, and describe each design option in more detail in the subsequent sections.

Table 2. Balanced Designs Deployed by the Six Companies

	Temporal Separation	**Structural Separation**	**Parallel Structures**
BMW Group Automotive 106,000 employees Sales: US$ 54Bn*	One full cycle with two fundamental changes: ■ Decentralization to enable growth in new areas (1995) ■ Company-wide integration and shared services to recover from losses (2000)	Three separated units for new businesses: ■ The luxury car producer *Rolls-Royce* ■ The high performance car unit *M-GmbH* ■ The *hydrogen-powered vehicles* technology unit	Parallel structures were used once for: ■ Managing the small car unit *MINI* — MINI shares all major functions with BMW, with the exception of marketing, design, and (partially) sales
Deutsche Bank Banking 75,000 employees Sales: US$35Bn	One full cycle: ■ Decentralization to enable new growth (1996) ■ Centralization with global back-office functions after declining profits (2001)	Two separated units: ■ The online broker *Maxblue* ■ The private banking boutiques *Ruud Blass* and *Cornelias*	Two parallel structures: ■ The retail derivatives business *X-Markets* ■ Selling *investment banking products* to private wealth clients
Helvetia Insurance 5,000 employees Sales: US$5Bn	One full cycle: ■ Decentralization to enable new growth (1996) ■ Centralized control and shared services in reaction to annual losses (2002)	None	Parallel structures were used once for: ■ The solution provider *e-center solutions* — the center offers Helvetia's e-insurance solutions to third party customers
Holcim Cement 90,000 employees Sales: US$15Bn	Single centralization move: ■ Global integration and back-office functions to realize synergies (2001)	Two separated units: ■ The cement trading business *Holcim Trading* and the building materials unit *Aggregate Industries*	None
Nestlé Nutrition, Health & Wellness 233,000 employees Sales: US$73Bn	Single centralization move: ■ Establishment of global back-office functions and manufacturing centers to realize synergies and cost savings (2002)	Five separated units: ■ The skin care business *Galderma,* the nutricosmetics unit *Inneov, Nespresso,* the *Nutrition* unit, and *Nestlé Water*	Parallel structures were used once for: ■ The *Corporate Wellness Unit* — the unit leverages existing products by adding health elements
Siemens Electrical Engineering 461,000 employees Sales: US$90Bn	Single centralization move: ■ Establishment of global shared services and move from a strategic towards a management holding (2000)	Three separated units for new businesses: ■ The mobile unit *ICM* ■ The *photovoltaic* unit ■ The *wind energy* unit	Parallel structures were used eight times for: ■ The *Sector Market Development Boards* — the boards combine products from several sectors and divisions into integrated solutions

* All company data taken from 2005 company reports

How did these organizations deploy and execute balanced designs in their pursuit of profitable growth? Figure 1 outlines the framework that emerged from our analysis of the six companies. First, the companies deployed the three different designs in distinct contexts. Temporal separation was used to enable radical changes to the firm's existing operating processes. Such changes occurred in situations when the organizations faced environmental change that severely affected their performance. Conversely, the companies made use of structural separation to support the creation of new businesses. Often deployed when the existing core business's sales had stalled, the creation of separate units allowed for completely new growth platforms to be established. Finally, parallel structures were implemented to allow the organizations to upgrade existing products to reach new customer segments. These structures redeployed existing resources to allow new revenue streams to be generated.

Second, the companies' execution strategies reflected the distinct objectives of the three design options. Temporal separation was thus solely deployed on those rare occasions when fundamental change became inevitable to ensure the company's sustained success. Its use was also constrained to the firm's operational and support functions, with the market-facing activities remaining largely unchanged. Structural separation's objective of creating radically new businesses was supported by the considerable autonomy that the new units enjoyed. This autonomy was achieved by allowing new divisions to control most of their value chain activities. At the same time, the new units maintained cross-unit relationships to benefit from the existing businesses' resources. Parallel structures' orientation towards upgrading existing products was supported by their close integration into the primary units. The focus on new customer segments was enabled through the creation of dedicated sales and marketing functions, the establishment of supportive infrastructure, and the delegation of leadership authority.

Third, the learning outcomes varied considerably across the different types of balanced structures. Temporal separation disrupted operational routines and thus gave rise to supply-side exploration. At the same time, the market-facing functions remained untouched and thus continued to pursue demand-side exploitation. Conversely, structural separation enabled both supply and demand-side exploration by creating new units with a full set of value chain activities. Limited exploitation was ensured through the establishment of cross-unit interrelations. Parallel structures supported supply-side exploitation by leveraging the companies' existing products, while allowing demand-side exploration of new customer segments through fully dedicated sales and marketing functions.[11]

the companies used the three balanced designs as complementary rather than mutually exclusive solutions.

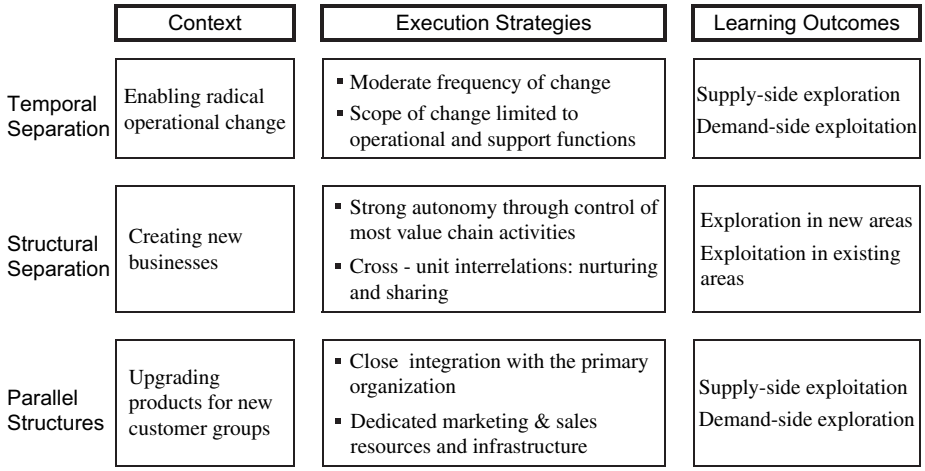


Figure 1. Process Model of Balanced Designs

In sum, the companies used the three balanced designs as complementary rather than mutually exclusive solutions. All three solutions combine exploitation and exploration activities to some extent, but address different dimensions of these activities. While temporal separation enables supply-side exploration and demand-side exploitation, parallel structures support demand-side exploration and supply-side exploitation. Structural separation allows for both supply and demand-side exploration, although this is mainly limited to new business areas. Over time, companies may thus deploy all three design options in different contexts and for outcomes that all contribute to the overall objective of long-term profitable growth. A detailed presentation of the three balanced designs that constitute the model follows.

Temporal separation: reviving the organization

Temporal separation occurred when the sample organizations had to fundamentally realign their operational procedures to meet changing environmental conditions. These shifts in alignment represented major disruptions that affected the entire organization, and the companies used temporal separation only for major change — rare events - in order to minimize the high implementation costs and risks of this solution. Temporal separation was also limited to operational functions, to avoid disruption of client-facing activities. Overall, this design option was characterized by a supply-side exploration logic: while the organizations' operational processes were altered radically, the demand-side functions continued to exploit existing practices.

The setting: enabling radical change in organizational practices

Structural changes usually occurred when the examined organizations faced declining performance due to changing competitive or market conditions. The companies switched to decentralization when they lagged behind their competitors in markets on the upswing. This decentralization was realized by dissolving centralized support staff, breaking up divisions into smaller units, and delegating decision-making power to lower levels. Companies returned to centralization when they experienced declining profits during market downturns. The switch to centralization was marked by the creation of company-wide shared services, the consolidation of units into larger entities, and the reinforcement of corporate control.

companies decentralized when lagging behind competitors in markets on the upswing, and re-centralized when profits declined during market downturns

The Swiss insurer Helvetia, for example, granted divisional heads considerable decision-making autonomy in 1996 to fight the company's declining market share of a booming insurance market. Corporate centre activities were limited to financial planning and control. Decentralization increased the entrepreneurial spirit, enabling the divisions to move faster and provide innovative solutions targeted at local customers' requirements. Helvetia's organic sales growth rose significantly averaging seven percent between 1996 and 2000. However, while this restructuring helped to boost sales growth, the lack of corporate control led to increasingly bloated cost structures and risky investment behaviour in several of the company's divisions. When it was hit hard by the financial markets' downturn, Helvetia had to post its first-ever annual loss in 2002. CEO Erich Walser reacted to these challenges with a second restructuring initiative intended to strengthen corporate control and increase operational efficiency. The group's management board, thus far restricted to divisional heads, was extended to include the most relevant functional leaders. A

corporate centre was established with company-wide responsibility for selected operational tasks such as asset and risk management. The centralization led to a significant increase in efficiency. Helvetia returned to profitability by 2003, and in 2005 posted the highest net profit in its 150-year history.

In a similar pattern, BMW and Deutsche Bank have experienced a single temporal separation cycle during the last decade: a decentralization move in the booming mid-90s, followed by a recentralisation in the aftermath of the stock market downturn in 2001. Holcim, Nestlé and Siemens had already moved to a decentralized structure at the start of the observation period in 1995, but since 2001, all three have launched recentralisation initiatives, with the creation of company-wide shared service operations and the integration of smaller units into larger entities. (Table 3 gives more detailed information on selected moves.)

In sum, temporal separation occurred when the companies needed to make major realignments to their existing structures in order to maintain profitable growth in the face of significantly changing environmental conditions. Structural changes occurred at the corporate level and were accompanied by the alignment of corporate strategies, business processes and contextual elements.

Execution strategies: handle with care

Several prior studies have observed that companies address profitable growth's conflicting organizational requirements through temporal separation. While the basic pattern is similar to our observations, the execution strategies of the companies we observed differ in two fundamental aspects from those previously described: in the *frequency* and in the *scope* of change.

Prior studies have observed and recommended *high frequency* change between centralization and decentralization. These studies expected continuous structural reorientations to contribute to the firm's renewal, thus helping to prevent organizational inertia. Single case studies of companies such as ABB, Ericsson, Ford, HP and Sony have revealed four to five fundamental changes over a ten-year period,[12] but it is interesting to note that all these firms failed to realize profitable growth during the period under observation. Conversely, the profitable growers observed in this study undertook just one or two changes over the same period, and the interviewees felt that this was due to the inherent costs of restructuring not being incurred too often. As Nestlé's head of controlling explained:

> *Radical structural change at the corporate level represents a considerable risk. You are disturbing people, they may lose confidence, and the management may lose credibility. Sometimes you cannot avoid radical change because you have to react to major external change. In general, however, such radical change should be seen as the last resort of corporate design.*

In addition to the upfront costs of change, which include both planning for and implementing the new structure, a transitional loss of productivity due to employee turnover and resistance to change was frequently observed.[13] At Deutsche Bank, for example, the cost/income ratio — a proxy for operational efficiency in banks — rose sharply after its two major reorganizations in 1996 and 2001. This was due both to the direct restructuring costs (which exceeded € 1 billion for each change) and also the indirect costs of change. During periods of change, firms' limited managerial capacity is tied up with internal activities rather than being focused on customers and competitors. Nestlé's change towards a more integrated and efficient organization in 2002, for example, tied up over 2,000 of the company's best managers in a multi-year restructuring effort. The interviewees thus considered long periods of structural stability crucial for executing both exploitation and exploration-oriented activities. As the CEO of Helvetia's Austrian division explained:

> *We don't challenge our structures on a yearly basis. While change is crucial, incessant change is counterproductive. The continuity we enjoyed over the last five years has helped us to focus on execution in the marketplace.*

Table 3. Temporal Separation – Selected Examples

Case	Context	Execution Strategy	Learning Outcome
Deutsche Bank Change I (1996)	Deutsche Bank was in a difficult situation in 1996. The group had fallen behind its major competitors in both income growth and share price development. The expected market recovery threatened to further widen the gap. Deutsche Bank opted for a divisional structure with a lean corporate center and five self-standing group divisions with full operational responsibility. The objective was a closer alignment with the market and faster revenue growth.	The restructuring represented Deutsche Bank's first fundamental realignment in more than a decade. The bank assigned € 1.3 billion to cover the restructuring expenses which was more than the group's annual net income at the time. The program's three-year roll-out bound considerable managerial and financial resources which contributed to a sharp decline in operational efficiency. The cost/ income ratio increased from an average of 62 percent in the years prior to the change to an average of 75 percent in the roll-out period.	The changes primarily concerned the back-end functions that were realigned with the new divisions. Aside from the addition of key accounts, the client-facing processes remained intact. The first positive effects were felt in 1997 when swifter new product introduction and improved service levels contributed to the group's highest ever net commission income. The subsequent years were marked by an increase in revenues and share price.
Deutsche Bank Change II (2001)	Despite reporting strong growth in 2001, Deutsche Bank was falling ever further behind its long-term target of a cost/ income ratio of 65 percent. The impending economic downturn risked exposing the bank's weakness in operational efficiency. The realignment grouped the previous five divisions into two business groups. Further, a central operational support unit was created with the objective of enabling annual synergies of € 1.5 billion.	The program was implemented over a three-year period and incurred a restructuring cost of one billion euros. The measures included outsourcing, process reengineering, and laying-off of more than 6,000 employees. The realignment activities took its toll on profitability, contributing to an unprecedented average cost/income ratio of 83 percent during the program roll-out. Since the structural changes' completion in 2003, the cost/income ratio has declined, reaching its lowest value in more than a decade in 2006.	Key back-office functions including human resources, IT, purchasing, and transaction services were regrouped in the newly established DB Services unit. All business processes were transformed to increase efficiency and cost awareness. Positive effects became visible in 2004 when the administrative expenditure dropped for the first time in a decade and the group's net income and return on equity nearly doubled.
Nestlé Change (2002)	Although Nestlé's sales grew faster than those of most of its rivals, its profitability lagged far behind. Nestlé's sales and administrative overhead was 17 percent of sales in 2001 compared to its rivals' average of 12 percent. Nestlé launched three initiatives to integrate and streamline its organization: *Target 2004+* in production, *FitNes* in administration, and the group-wide operational excellence initiative *GLOBE.*	One of Nestlé's core principles is continuous improvement to 'avoid dramatic one-time changes as far as possible.' The restructuring launched in 2002 was the group's first fundamental realignment in more than a decade. Nestlé incurred restructuring costs of more than CHF 3 billion. *GLOBE* alone took six years to be rolled out and tied up more than 2,000 of Nestlé's best people They worked on 800 projects, including the largest SAP implementation in the world to date.	Nestlé remained local in its client-facing activities, while regionalizing or centralizing its back office functions. All back-line business processes were redesigned to meet best practice standards. The three initiatives delivered a combined cost saving of more than CHF 7 billion by 2006. The group's cost of goods sold dropped from 47 percent of sales in 2000 to 41 percent in 2006.

The profitable growers in this study thus limited their cycling moves to reacting to fundamental changes in the market, or to severe internal performance problems.[14]

These profitable growers limited their cycling moves to reacting to fundamental market changes or severe internal performance problems

Another major point in which this study differs from prior studies is in the *scope* of temporal separation. Cycling moves have thus far been described as radical, corporate-level switches between organic and mechanistic structures. The successful companies in this study were, however, more prudent when imposing organizational change, with adjustments usually being limited to operational and support functions such as human resources, information technology, logistics, production and purchasing. As Helvetia's head of strategy explained:

> *Change at Helvetia is about focused adjustments rather than radical transformations. While our support functions are subject to a certain fluctuation, our client-facing activities such as product development, marketing, and sales have remained strongly decentralized for decades.*

Similarly, Deutsche Bank, Nestlé and Siemens have centralized their back-office functions since 2001 to realize synergies and improve company-wide coordination — but the decentralized orientation of all their client-facing activities, meanwhile, has remained unchanged. The limited scope of their structural adjustments' was designed to avoid the inherent risks and disruptive effects of more radical change.[15] More importantly, changes to operational practices did not have a major disruptive effect on client-facing activities, and the front-end structures of all six companies have showed considerable stability over the last decade.

The outcome: supply-side exploration in the core business

Prior studies on temporal separation have emphasized that firms pursuing this organizational strategy are focusing on exploitation and exploration sequentially rather than simultaneously. According to this perspective, exploitation is emphasized in periods of centralization, and exploration occurs in periods of decentralization.

While a certain alignment of the firm's learning orientation from one period to the next was observed in the companies we investigated, the informants considered a different learning outcome as more relevant, reporting the greatest explorative learning as taking place during the actual individual structural change events. The changes were radical disruptions of the firm's operational procedures, leading to new ways of doing business. Explorative learning thus occurred when radical organizational changes were being implemented, rather than during the subsequent periods of relative stability.

At Deutsche Bank, for example, the consolidation of back office functions in 2001 brought together functional experts from all parts of the organization. The newly formed centralized functions such as financial control, human resources, information technology and risk management, had to establish completely new operational processes and systems. By breaking the silo mentality of the bank's functional departments, the changes led to a surge in company-wide cooperation and contributed to significant efficiency improvements. As one functional head stated:

> *This fundamental reorganization helped us to revitalize our support functions. In the past, those offering support had been increasingly set in their ways. We changed the context and thus forced them to think about new processes and solutions. That was a major change, but it supported a completely new understanding of ourselves as an integrated, lean, and focused bank.*

Similar learning effects have been associated with the centralization programs at Holcim and Nestlé, among others. At Nestlé, the strategic transformation in 2002 led to a more integrated and streamlined organization that enabled cost savings of more than CHF 7 billion. At Helvetia, to cite another example, the centralization of its previously decentralized asset management function led to major revisions of the company's investment policies and procedures. In all these cases, explorative learning occurred within the firm's existing operational or support functions. Learning from temporal separation was thus focused on the supply-side rather than the demand-side. While operational processes were significantly altered, the client-facing activities continued to focus on exploitation. Temporal separation may thus be an organizational solution to balancing exploration and exploitation on the firm's supply-side functions, rather than in its demand-side activities.

This section has focused on firms' deployment of temporal separation as a solution to enable it to achieve a better balance between exploitation and exploration. For practicing managers, our results have three key implications:

- Structural shifts shake up the organization and enable explorative learning, which makes temporal separation a beneficial strategy for radical organizational alignments in the face of fundamental environmental change and/or severe performance crises;
- Structural shifts are costly to implement, which makes temporal separation an inappropriate strategy for continuous structural alignments to smaller environmental changes.
- Structural shifts disrupt business operations, which is particularly risky when client-facing units are involved. The cycling strategy may thus be more appropriate for changes to the firm's administrative and support functions.

Structural separation: creating new businesses

Structural separation occurred frequently in the organizations we observed when they launched new businesses to generate revenue streams outside stagnating core businesses. These new ventures involved fundamentally different activities from the companies' existing businesses, both in terms of products and target clients. The newly established units enjoyed high degrees of autonomy, and were externally focused in order to gain fresh ideas and capabilities that might be lacking within the firm. At the same time, however, existing skills and assets were transferred to nurture the new activities. Overall, this design option was characterized by a supply and demand-side exploration logic in the new businesses, while the core businesses remained unchanged, continuing to exploit the firms' existing capabilities.

newly established units were externally focused to gain fresh ideas and capabilities …. [but] existing skills and assets were also transferred to nurture [them]

The setting: launching radically new businesses

The companies we examined used structural separation to complement their core operating units concerned with the efficient exploitation of existing capabilities by creating separate innovating units, which would be concerned with exploring new growth opportunities. The structural separation ensured that each unit was configured to the specific needs of its task environment. The new

innovating units had more flexible and organic structures compared to the operating units, which retained their more formal and mechanistic structures.

Nestlé, for example, used structural separation for its Nespresso venture, which sells high quality coffees packed in individually portioned aluminium capsules for exclusive use in specially designed machines. Entry into this high-margin premium segment represented a major departure from Nestlé's traditional business, which had been characterized by large-scale production and mass marketing.[16] In the early days, the Nespresso team faced much resistance and its progress was hindered by the company's existing rules and structures. Managers from the Nescafe division feared the new concept would compete with the division's instant coffee brand. To safeguard the Nespresso project, the business was moved outside Nestlé's main coffee structure, as described by a member of the board:

> *We set up Nespresso as a separate company, fully owned by Nestlé, but completely independent from the main organization. They had to develop their own processes and find new ways of coping.*

The new unit developed its own commercial, distribution and personnel policies outside the Nestlé organization. In contrast to Nestlé's decentralized structure, Nespresso was managed as a global business selling a standardized product all over the world. The entrepreneurial culture helped it to move faster and promote innovative ideas such as the 'club concept,' which represented Nestlé's first direct marketing experiment and played a key role in Nespresso's success. Although Nespresso was managed at arms length, Nestlé's top management ensured that there was coordination with the main organization.

Nestlé successfully repeated this concept - of setting up a separate organization with a different structure and culture - in subsequent new business ventures, including the skin-care business Galderma, the nutricosmetics business Inneov, the specialty Nutrition unit, and Nestlé's water business. Structural separation was also deployed by four of the remaining five companies investigated. Examples include BMW Group's luxury car business Rolls-Royce, Deutsche Bank's launch of its Maxblue online brokerage activities, Holcim's move into cement trading, and Siemens' creation of a separate wind energy unit (see Table 4 for more detailed information on these examples).

In sum, structural separation was used for ventures in new growth markets beyond companies' existing core business. Setting up these new ventures as separate units gave them more entrepreneurial environments and allowed them leeway to adopt more flexible structures. The entrepreneurial units developed radically new products and implemented business processes that differed significantly from those of the firms' existing businesses. At the same time, the existing core businesses remained unchanged, continuing to focus on operational improvements.

Execution strategies: balancing autonomy and integration

Several prior studies have suggested that structural separation requires innovating units to have a strong degree of autonomy, while maintaining some degree of cross-unit integration. Our empirical study demonstrates how the companies that we researched achieved both autonomy and integration.

Autonomy was primarily ensured by granting the innovating units full control of a nearly complete set of value chain activities. BMW Group's luxury car unit Rolls-Royce, for example, was set up as an independent company within the BMW Group. The unit's management reported directly to the overall board of directors, developed its own strategy, and controlled its own finance, marketing, product development and sales functions. Rolls-Royce saloons are produced in a dedicated facility at Goodwood in the UK, and distributed through a separate network of specialized luxury car dealers.[17] This far-reaching operational control and independence provides Rolls-Royce, as well as other innovating units such as the online broker Maxblue at Deutsche Bank, with the opportunity to develop completely new operational procedures and go-to-market strategies. Maxblue, for example, developed marketing and sales campaigns targeted at a young and hip clientele that differed radically from Deutsche Bank's more conservative campaigns. The unit even

Table 4. Structural Separation – Selected Examples

Case	Context	Execution Strategy	Learning Outcome
BMW Group Rolls-Royce (2003)	In 1998, the premium car producer BMW Group acquired the rights to the Rolls-Royce brand for US$ 65 million to expand its range of products at the very top end of the premium segment. Development of the new Rolls-Royce Phantom began in early 1999 and lasted 44 months. BMW Group invested more than US$ 100 million in new manufacturing facilities and headquarters for Rolls-Royce that were completed in 2002 in Goodwood, England.	Rolls-Royce Motor Cars Ltd. was established in 2003 as a separate unit with its own strategy, finance, marketing, and sales functions. Rolls-Royce cars are assembled in the unit's Goodwood plant and distributed through a network of 80 luxury dealers. Rolls-Royce relies on BMW Group's established capabilities in component development and production. Direct carryover from other BMW models is about 15 percent. Several components, including the body, are assembled in BMW's German plants.	Developing the Rolls-Royce Phantom involved the design of entirely new engines, parts, and production processes. A separate sales channel was set up to reach new customer groups. These processes occurred outside the group's existing operations. The Rolls-Royce Phantom is the most successful motor vehicle in the luxury segment. For the first time, more than 1,000 cars were sold in 2007. The launch of a second model series is scheduled for 2010.
Deutsche Bank Maxblue (2001)	In 2000, new entrants had captured a large share of the fast-growing European online brokerage market. Deutsche Bank reacted by launching its online brokerage service Maxblue in April 2001. Maxblue focused primarily on reaching new customer groups. A partnership-based model helped to enter new geographic markets. Maxblue pursued an open finance model that allows third party financial products to be distributed.	Deutsche Bank invested € 500 million to set up Maxblue as a wholly-owned subsidiary. The new unit enjoyed strong autonomy in the development and operations of its brokerage platform, as well as in the marketing of its products. Partnering with Deutsche Bank's personal banking business allowed for a 'bricks and clicks' model that gave online clients access to their local branches for personal advice. The unit's clients also benefited from access to the bank's research and investment banking expertise.	Maxblue was an instant success with more than 500,000 customers and a 12 percent market share by the end of 2001. In 2004, Maxblue became the leading German direct broker with a business volume of € 8.2 billion. Important success factors were the unit's award-winning technology platform and the highly innovative marketing campaigns and pricing model, but also the ability to leverage the bank's existing assets in investment and retail banking.
Nestlé Nutrition (2004)	Nestlé identified specialized nutritional products as a related segment that allows for sales and profit growth rates well above those in their core food and beverage business. In 2004, Nestlé launched Nestlé Nutrition to expand its activities to infant, health care, and performance nutrition. The unit is focused on its products' nutritional benefits rather than taste and addresses specific customer segments such as infants and athletes.	Nestlé Nutrition is a stand-alone business, 100% owned by Nestlé, operating outside the main organization and generating its own profit and loss statement. The unit has its own production, R&D, and sales functions. People are often recruited externally from pharmaceutical companies. Nestlé Nutrition buys several services including IT and human resources support from Nestlé Group's country operations and shares some production assets with other business divisions.	The Nutrition unit operates in a new competitive space: It is based on intensive research and development and requires clinical trials. Products are sold in pharmacies or sports outlets. The key influencers are doctors or coaches rather than television advertisement. Since 2004, Nestlé invested CHF 11 billion in acquisitions for its nutrition business. With sales of CHF 10 billion in 2007, Nestlé Nutrition achieved a leading position.

decided to add financial products from external providers to its portfolio. The innovating units' high degree of autonomy is often reflected by their independent brand names, such as Maxblue at Deutsche Bank or Galderma and Inneov at Nestlé. Besides operational independence, the distance between operating and innovative units is often further widened by the innovative units' strong external focus. Most of these units recruited many of their employees from outside the main firm, and established their own networks of cooperative relationships with external partners. Acquisitions were frequently employed to strengthen the new units through the injection of external resources and new capabilities. Nestlé, for example, recruited employees for its Nutrition business from pharmaceutical companies and invested more than CHF 11Bn on acquisitions to gain additional assets and resources.

We found that the ways in which organizations managed their cross-unit interrelations differed considerably from prior descriptions of structural separation. Previously operating units and innovative units have often been described as functioning completely separately from one another, as if they were autonomous companies. According to this perspective, coordination between units is limited to a few top managers at the corporate level. Integration between the units has thus been cited as the main challenge of structural separation. In this empirical study, the companies achieved a well-balanced integration by relying on two integration mechanisms we could term *nurturing* and *sharing*.

companies achieved a well-balanced integration by relying on two integration mechanisms: nurturing and sharing.

Nurturing refers to the parent company's support of innovative units by transferring functional know-how and expertise. Thus Nestlé's premium coffee subsidiary Nespresso benefited from specialist support in areas such as finance, public relations, purchasing, research and development and marketing, while Rolls-Royce relied strongly on BMW Group's competences in areas such as safety, electronics, emissions and materials technology. Cross-unit task forces were used to transfer design, marketing and manufacturing know-how. While nurturing was more important in new business developments' early stages, these activities were relatively persistent over the ventures' life cycle. In the later stages of development, however, instances of 'reverse' nurturing have been observed. Nespresso, for example, recently transferred technology and marketing know-how back to Nestlé, thus enabling the launch of the Nescafe Dolce Gusto coffee system, a low-end version of Nespresso, which targets Nestlé's existing clients in the mass market. Successful nurturing may thus also contribute to breaking inertia and stimulating new growth in existing businesses.

Sharing relates to the synergistic deployment of assets shared between operating units and innovative units. At Deutsche Bank, for example, a single entity provided transaction services for both the Maxblue online brokerage business and the bank's traditional private banking business. BMW Group's Dingolfing factory, to cite another example, built the main brand's 5, 6, and 7 series, while at the same time supplying car bodies for production of the Rolls-Royce Phantom. The sharing of production assets allowed better capacity utilization, operational synergies, and the elimination of duplicate functions.

While more intensive integration took place in practice than was previously described in theory, these activities were clearly limited. As the former CEO of Rolls-Royce explained:

> *We benefit from BMW's know-how and resources, but we do not use BMW parts or engines. Rolls-Royce is a national monument — all major activities have to happen in England. We need this distance to the BMW group to preserve our distinctive image and character.*

The interviewees considered too much integration harmful to structural separation's primary objective of providing new units with the autonomy to differentiate themselves from the parent

organization. The challenge was rather to find the right balance between separation and integration. As the head of Nestlé's Nutrition unit explained:

> *The most relevant issue is to get the balance right. It wouldn't make sense to distance ourselves so far from Nestlé that we would have none of the benefits of being part of such a strong and global organization. On the other hand, if we remain dominated by Nestlé's traditional food and beverages practices and procedures, we will never reach our full potential in the specialty nutrition business.*[18]

The benefits and risks of integration were thus carefully evaluated to preserve the new entities' ability to generate new ideas that differed radically from the products in the organizations' core operations. Nevertheless, some degree of synergistic exchange between the units was considered indispensable in managerial practice.

The outcome: supply & demand-side exploration in new businesses

In the examined companies, structural separation helped to create a new organizational environment adjusted to fundamentally different requirements. Divergence from existing behaviours often helped to break inertia, thus providing truly new ideas. 'Project Nespresso,' for example, only became successful when Nestlé decided to create a dedicated unit for it. The development of a radically new concept (the coffee-capsule technology and its associated special machinery) required a certain distance from Nestlé's existing coffee business. In much the same way, BMW Group (for the Rolls-Royce venture), Holcim (for the cement trading venture), and Siemens (for the photovoltaic venture) used structural separation to produce completely new concepts. The innovating units' primary orientation was thus towards exploring new capabilities. Explorative learning occurred within both the supply-side and demand-side processes. Nestlé's Nutrition unit, for example, develops functional food for athletes, infants and patients. Significant new scientific capabilities are required to produce these products, which are intended for a medical environment, rather than for Nestlé's traditional markets. The selling of such specialized products also differs from Nestlé's traditional mass-market distribution, requiring alternative specialist sales channels and marketing methods. As one manager at the Nutrition unit stated:

> *The Nutrition business is in a different competitive space than the rest of Nestlé. While the traditional food business is strongly consumer driven, the nutrition business is much more science driven. Products are sold in pharmacies or sports outlets and key influencers are professionals such as nurses, doctors or coaches, rather than television advertisements.*

The Nutrition unit thus engaged in both supply-side and demand-side exploration to come up with fundamentally new products and processes. At the same time, Nestlé's core food business continued to exploit its well-established products and distribution processes.

Despite the innovating units' primary orientation towards exploration, some elements of 'contextual ambidexterity' — defined as the simultaneous pursuit of exploitation and exploration within a unit — were identified.[19] As described before, the innovating units regularly benefited from the core units' capability transfer. BMW Group's Rolls-Royce unit, for example, relied on technological capabilities transferred from the group's research and development centre, the cross-unit integration thus allowing for some additional exploitation of the firm's existing capabilities. A similar observation was made regarding the operating units. As described above, instances of 'reverse nurturing' — the transfer of new capabilities from the innovating units back to the operating units — led to some additional explorative learning. These additional (and complementary) learning processes were, however, limited by the institutional distance between the operating and innovating units. While structural separation may occasionally stimulate exploration, it fails to provide continuous exploration in the existing core business.

structural separation may occasionally stimulate exploration, [but] fails to provide continuous exploration in the existing core business.

In sum, the learning outcomes from structural separation are multifaceted. The innovating units are primarily focused on exploration, while the operating units are oriented towards exploitation — thus enabling *structural* ambidexterity *across* both types of units. Additionally, however, cross-unit integration processes (described as 'nurturing' and 'reverse nurturing') may enable limited *contextual* ambidexterity *within* both types of units.[20]

The implications for managers are as follows:

- Organizations can benefit from structural separation to explore new product-market segments beyond their established core operations;
- While the separated units require considerable structural and cultural autonomy, the parent company has to inject functional expertise and enable synergistic asset sharing with the mainstream businesses;
- While structural separation may occasionally spark exploratory activities in the core units as well, this is clearly insufficient to fulfil all the main firm's exploratory needs.

Parallel structures: leveraging products in new markets

Parallel structures were deployed when the researched firms intended to upgrade or recombine existing products to develop solutions that could target new customer groups. The focus was on incremental innovation by exploiting existing capabilities and technologies. While the product-related and operational activities remained close to existing capabilities, the supplementary structures enjoyed significant autonomy in setting up their own market-facing activities. Overall, this design option was characterized by a demand-side exploration logic: while fundamentally new marketing and sales processes were established, the demand-side activities relied strongly on the exploiting of the existing capabilities.

The setting: upgrading existing products

The parallel structures deployed by the researched organizations to adapt existing products to address new customer segments enabled the employees to move back and forth between two types of structures, depending on their respective tasks. Formal *primary structures* were designed for routine tasks and to ensure efficient operations in the firms' existing businesses, while supplementary *project structures* were established to coexist with the formal structure. Employees spent part of their working time in the flexible project structures pursuing innovation activities.

The German electronics and electrical engineering company Siemens, for example, launched the company-wide *Siemens One* initiative in 2002 to drive profitable growth by increasing the penetration of existing customer segments, and by exploring new ones across sectors, divisions and regions. *Market Development Boards* (MDB) brought experts from several sectors and divisions together to enable cross selling and develop innovative solutions jointly for specific customer segments. The Siemens Airports MDB, for example, united experts from seven divisions to work together in project teams. Existing products in areas such as aircraft preparation, baggage and freight handling, and passenger information services were integrated into end-to-end airport solutions. The sectors jointly invested tens of millions of euros in the *Siemens Airport Center* where Siemens experts could develop airport-specific solutions. A project leader at the Siemens Airports MDB pointed out the centre's importance for market innovation:

The Siemens Airport Center is a crucible of innovation where Siemens pioneers new airport solutions. We bundle products from different sectors and divisions into integrated solutions and test them within our center. Siemens has become the trendsetter in this market and reaches completely new customer segments.

The Airports MDB is just one of a dozen market development boards that have been established, which all rely on the same organizational model. They are led by full-time managers, and project teams are composed of part-time team members from the different sectors and divisions. Sector heads decide on the market development board's budget and resources, but all the boards are also supported by a central Siemens One team. Over the last three years, the Siemens One initiative has contributed to the company's successful growth by generating a significant number of additional orders for innovative solutions.

Similar structures were deployed at four of the five remaining companies. BMW Group ran its MINI brand as a cross-functional project with delegates from the parent company's R&D and production departments. Deutsche Bank used parallel structures to launch X-Markets, a venture into retail derivatives, as well as to develop private wealth management solutions for its investment banking clients. Helvetia launched a group wide eInsurance platform with delegates from its divisions. Nestlé deployed a parallel structure for its Corporate Wellness Unit, a cross-business initiative to upgrade existing products by developing nutritional add-ons (see Table 5 for more details on the selected examples).

In sum, parallel structures supported exploitative innovation through the development of new solutions based on existing products and capabilities. These solutions allowed new customer or market segments to be addressed, thus contributing to the companies' future growth.

Execution strategies: empowering supplementary structures

Prior studies have described parallel structures as a means to build innovation into organizations whose primary focus is operational efficiency. While the basic pattern described in these studies comes close to our observation, there are significant differences in respect of the supplementary structures' design. To date, such secondary structures have been described as relatively informal task forces, communities of practice or working groups. From that perspective, employees focus primarily on their operational tasks in the primary structure, spending only limited time in the supplementary structures. In contrast, secondary structures that were far more *formal* have been observed in the companies we have analysed. Compared to previous conceptualisations, three main differences arise from our observations.

First, the organizations committed considerable resources to their supplementary structures. Project members spent a major share of their working time in these structures, which were also supported by several full-time employees. Nestlé's Corporate Wellness unit, for example, had more than twenty full-time employees responsible for coordinating its innovation activities. Besides committing human resources, the organizations invested strongly in the supporting infrastructure. As mentioned above, Siemens spent millions to establish an innovation centre for its airport project organization, while Helvetia has established the Zurich-based *eCenter* to support its eInsurance-related project structures.

Second, the supplementary structures comprised multiple value chain activities rather than being limited to product development. Siemens' Airport Solutions market development board, for example, covered all functions from product development to marketing and sales. Interestingly, the supply-sided functions were far more integrated than the relatively autonomous demand-side functions. The companies' main research and development functions ensured product development, while the primary organizations carried out production and administrative tasks. Marketing and sales, however, were usually undertaken by dedicated resources from within the parallel structures. At Siemens Airport MDB, for example, a team of full-time account managers is exclusively dedicated to selling integrated airport solutions. At BMW Group, MINI develops its own brand strategy, and takes on responsibility for marketing and sales. As one MINI project manager explained:

Table 5. Parallel Structures – Selected Examples

Case	Context	Execution Strategy	Learning Outcome
BMW Group MINI (2001)	Through the MINI brand, BMW Group established a new premium offer in the small car segment, allowing the group to benefit from the higher growth potential of this market. Deliveries of the first MINI cars started in 2001. The MINI was designed to reach new customer segments. MINI clients consider themselves as young, urban, and trendy, quite different from those of BMW. More than half of the MINI customers are new for the BMW Group.	MINI is organized as a virtual company that relies strongly on the Group's resources. Experts from BMW Group's functional resorts are brought together in projects to develop new MINI models. The three MINI production sites in England are managed by BMW. MINI enjoys stronger autonomy in branding, marketing, and sales. A team of full-time resources takes on responsibility for marketing campaigns, sales planning, and pricing. Dedicated showrooms allow customers to experience the MINI brand at the point of sales.	Product development is the sole responsibility of BMW Group's R&D department and its existing network of suppliers. However, MINI pursues totally new ways of marketing and branding. Examples include the use of non-traditional sales channels and unconventional marketing campaigns. MINI has become one of the most successful car brands in the premium segment with annual sales of more than 220,000 units in 2007.
Deutsche Bank X-Markets (2002)	The volume of derivatives traded in Germany increased tenfold between 1993 and 2002. Derivatives are financial contracts whose values depend on an underlying asset such as a stock or currency. In 2002, Deutsche Bank's investment banking arm was the German market leader in derivatives for corporate clients. In cooperation with the retail division, *X-Markets* was launched to develop and sell derivatives to private clients.	X-Markets relies on product development projects that bring together experts from the Bank's retail and the investment banking divisions. Although composed of part-time delegates, the projects are led by a full-time manager. X-Markets is supported by two teams with full-time resources. The first operates the Xavex Online trading and distribution platform that has been designed specifically for retail derivatives. The second is responsible for marketing and distribution.	X-Markets' products are developed by customizing the investment bank's existing range of derivative products to the needs of private clients. X-Markets pursues new ways in marketing and distribution: products are sold online and through third party distributors such as online brokers. Since 2002, Deutsche Bank has become the largest issuer of retail derivatives in Germany and has recently expanded its offerings abroad.
Nestlé Corporate Wellness (2004)	Nestlé faces consolidating markets in its core food business. An exception is the market segment for wellness food with annual growth rates of 8 to 10 percent. In 2004, Nestlé launched the *Corporate Wellness* unit to incorporate wellness elements (or *branded active benefits*) in their existing food products. An example is *Calci-N*, a supplement that promotes bone health, which has been added to Nesquik chocolate powder and milk drinks.	The Corporate Wellness unit consists of horizontal projects that are composed of 400 *wellness champions* from different business divisions. They spent parts of their working time to jointly develop branded active benefits. A central unit with twenty full-time employees ensures project coordination and takes on the marketing function. The Corporate Wellness unit draws extensively on the Nestlé Group's global network of R&D centers. Product launches are jointly managed with the respective divisional heads.	The unit strives to incrementally improve existing products. By adding wellness elements, these products are repositioned towards higher-margin customer segments. The unit plays the dominant role in designing and implementing the go-to-market strategy. Nestlé has modified more than 700 products by adding branded active benefits. Revenues with these products grew by 25 percent annually to CHF 4 billion in 2007.

We are a pure marketing organization, but one with a strong business focus. The client demands are very different from those of BMW's traditional customers. MINI relies strongly on unique marketing and sales campaigns and non-traditional sales channels. The MINI brand enjoys extensive freedom in defining its brand appearance, sales prices and volumes. We even develop our own business case.

Third, the companies actively shaped the organizational context to strengthen the project leaders' authority. Nearly all the projects had full-time leaders, who were empowered by specific training programs and senior management support. Human resource systems were often adapted to include project leaders' input. At Deutsche Bank's X-Markets project, for example, the project leader's evaluation is merged into the yearly performance management process. Moreover, most of the organizations established a shadow reporting structure to support the transparency of their project structure's sales and profit contribution.

Parallel structures combined close supply-side integration with far-reaching autonomy in client-facing activities

These measures tended to strengthen the position of these (potentially) weaker secondary structures, and were seen by interviewees as crucial for their protection. Committing considerable resources and delegating leadership authority helped to reinforce and speed up innovation activities, while the cross-functional design allowed for a more integrated and customer-focused approach. Parallel structures combined close integration on the supply-side with far-reaching autonomy in the client-facing activities.

The outcome: demand-side exploration in the core business

In the examined organizations, parallel structures had the same supply-side employees taking on tasks within both the primary and the supplementary structures. This ensured that existing capabilities were redeployed in new fields — an important prerequisite for the incremental improvement of existing products and procedures. Siemens, for example, deployed product managers from different sectors and divisions in parallel structures to develop integrated solutions based on their sectors and divisions' existing products. Parallel structures thus supported supply-side exploitation by redeploying existing resources. As the head of Nestlé's Corporate Wellness Unit explained:

Nestlé remains within its traditional products and categories, but is leveraging these products. We increase their value by adding health and nutritional elements.

At the same time, these structures' close personal integration into the primary structure effectively prevented supply-side exploration from taking place. The deliberate recourse to existing products and capabilities rendered the parallel structures inappropriate for handling disruptive change, and their strong roots in the firms' existing culture prevented the formation of radically new ideas. As a project manager from BMW Group's MINI division stated:

Trying to do matters differently and going unconventional ways at MINI are complicated by the fact that our people grew up in the BMW organization and think like the BMW organization. As MINI's research and development is fully integrated into the BMW group's research and development structures, there are very few truly groundbreaking changes emerging from within the organization.

The situation differed, however, on the demand-side, where parallel structures enjoyed significantly higher autonomy. By setting up separate and fully dedicated marketing and sales teams,

the parallel structures were enabled to come up with new concepts and solutions. At MINI, for example, the marketing campaigns differed significantly from those of BMW, addressing a younger, more fashion-oriented clientele. The unit is also extending its sales funnel activities to non-traditional sales channels (such as the Internet) not previously utilized by the parent organization. The demand-side exploration was evident in the independent go-to-market strategies of the parallel structures, which often differed considerably from those of the primary organization. At Siemens, for example, the sectors' base products faced fierce price competition, while the integrated market solutions were clearly differentiated from competing products. Contrary to the primary organization's price leadership strategy, the market development boards pursued a premium strategy. Since both business models relied on the same base products, the parallel structures enabled a mixture of supply-side exploitation and demand-side exploration.

In sum, the implications for managers are:

- Parallel structures enable firms to exploit and recombine existing capabilities to develop novel solutions that allow new customer segments to be explored;
- Enabling the exploration of new customer segments requires formal supplementary structures that are managed by powerful leaders with extensive demand side operational responsibilities;
- The supplementary structures' close personal integration with the primary structure on the supply side makes parallel structures an inappropriate solution for exploring radically new technologies and products.

Discussion

Profitable growth requires organizations to focus on efficient exploitation of their existing capabilities, but to be concerned with exploring new competencies as well. A focus on one of these skills may be relatively easy, but balancing the conflicting organizational behaviour modes of the two priorities has been described as a key challenge. Addressing the question of how successful organizations deal with the paradox of exploration and exploitation on a structural level, this study contributes to the emerging 'balanced view' of organizational alignment.

The process model of balanced designs presented in this article specifies the contexts, execution strategies and learning outcomes of three alternative structural solutions. The first solution, *temporal separation*, was deployed to enable radical change to align the organization's operating processes to changing environmental conditions. Due to the solution's high cost and disruptive effects, temporal separation was only used for fundamental change, a rare event, and its execution was restricted to the firm's operational and support functions. The disruption of operational routines gave rise to supply-side exploration, while demand-side activities remained focused on exploitation. The second solution, *structural separation*, allowed the creation of completely new businesses. The new units enjoyed considerable autonomy through their control of most value chain activities, but also maintained cross-unit relationships to benefit from the reuse of existing assets and skills. While operating units were primarily concerned with exploitation, and innovating units with exploration, a limited degree of contextual ambidexterity was observed in respect of both types of units. The third solution, *parallel structures*, was used to upgrade existing products to reach new customer segments. Although closely integrated with the operational and support functions of the primary organization, parallel structures had dedicated sales and marketing functions. By leveraging existing products, supply-side exploitation was thus combined with demand-side exploration to reach new customer segments.

The organizations used the three balanced designs as complementary rather than mutually exclusive solutions. The solutions were deployed in different contexts and contributed to different learning outcomes. While all three solutions supported a balance between exploitation and

exploration activities, each solution addressed different dimensions of these learning processes. Over time, organizations may have to execute more than one of these solutions, and perhaps more than once, to ensure sustainable and profitable corporate growth.

organisations may have to execute more than one solution, and perhaps more than once, to ensure sustainable and profitable corporate growth.

Implications for researchers

This study is among the first to focus on how organizations execute different balanced structural designs. Our findings contribute to the existing literature and have several implications for future research into temporal separation, structural separation and parallel structures.

The idea of temporal separation has been widely addressed by strategy scholars. In this article, we relate temporal separation to rare and radical change events. From an organizational theory perspective, Miller and Friesen argue that the radical character of change is dictated by the discreteness of organizational forms that fall into categories with internal consistent design parameters. Changes in the formal primary structure thus destroy existing routines and dislodge organizations from their current set of practices and procedures. Lamont and colleagues show that these disruptions can lead to a transitional loss of productivity due to employee turnover and resistance to change. Amburgey and colleagues conclude that with increasing frequency of change, the overall costs involved may easily negate the benefits. Our findings support these arguments and reveal the different costs and risks involved in a strategy of temporal separation. Further, we show that temporal separation may be particularly risky in client-facing activities where disruptions have an immediate effect on business results. Future research should thus continue to develop a more fine-grained understanding of cycling's virtues and vices.[21]

Further, structural separation has been described as a means to pursue exploitation and exploration in separate parts of the organization. We suggest that additional learning processes occur at the intersection of the exploitative and explorative units. Research on organizational boundaries proposes that spanning the boundaries of diverse organizational settings can be a key organizational competence to reinvigorate existing knowledge and develop new capabilities. Miller et al., for example, show that intraorganisational boundary spanning affects the innovation outcome more positively than the use of knowledge from within the same unit or from outside firm boundaries. Conversely, research on structural separation has thus far neglected the topic of inter-unit coordination and integration.[22] In this study, we provide first insights into these coordination mechanisms by describing nurturing and sharing processes. Future research should delve into whether and how organizations build capabilities for boundary-spanning activities across structurally separated units, as well as whether these capabilities contribute to exploitative and explorative learning.

Finally, several scholars have described parallel structures as less appropriate for radical than for incremental innovation activities. Bushe and Shani, for example, argue that parallel structures are constrained by the fact that individuals shift back and forth between primary and secondary structures. Both contexts thus rely on the same basic experiences, values, and capabilities that make exploring fundamentally different knowledge bases difficult. While we found similar constraints on the supply side, we observed considerable exploration activities on the demand side in our case companies. This may be explained by the higher degree of decision-making autonomy that these structures enjoyed on the demand side, as reflected by the separate sales channels and marketing activities. In a prior study, McGrath had also found that demand-side exploration benefits most from highly autonomous contexts. Conversely, our case companies made use of structurally separated units for supply-side exploration. While these units are decoupled from the firm's

existing businesses, they are more tightly controlled by top management. These findings suggest that the type of exploratory activity — demand-side or supply-side — may be an important boundary condition for the organizational context required to support these activities.[23]

Implications for managers

In addition to this study's contribution to the emerging academic discussion on how to balance exploration and exploitation in corporate structures, there are several valuable implications for managerial practice. The most relevant lessons learned from our case companies over various stages of organizational change are summarized in Table 6.

First, we suggest that, before selecting a structural solution, firms should conduct a thorough analysis of their specific organizational context and their desired learning outcomes. Prior studies show that firms frequently deploy design solutions that have been recommended by external experts or were successfully implemented by competitors.[24] Our findings in this study suggest that the usefulness of different structural solutions is contingent upon the specific context. Nestlé's choice of structural separation for its Nespresso venture, for example, appears appropriate given the need to explore entirely new technologies and client segments. However, the same solution may have been far less appropriate for Siemens' development of market solutions, given its strong reliance on existing products. Companies need to consider the relative importance of supply and demand-side exploitation and exploration for specific activities when selecting the balanced structural design that will be appropriate to their situation.

Second (as Siggelkow and Levinthal note) managers should perceive the implementation phase as an adaptive process rather than a one-time activity. Our findings show that successful firms did not just implement blueprint solutions, but continued to align and refine these solutions over time. Creating parallel structures for Deutsche Bank's retail derivatives business X-Markets, for example, certainly helped managers to focus on a new and highly attractive market segment. Turning X-Markets into a successful business, however, required various refinements of the structural arrangements, as well as the supportive alignment of the related contextual conditions. The alignment

These companies' basic structures were highly stable: unlike many less successful competitors, they had undergone no more than two general corporate restructurings [in 10 years]

Table 6. Implications for Managers

Stages of Organizational Change	Common Pitfalls	Suggestions
Selection of Structural Solution	Reliance on fashionable solutions that are recommended by external experts or adopted by competitors.	Conduct a thorough analysis of the specific organizational context and the desired learning outcomes.
Implementation of Structural Solution	Preference for rapid implementation of blueprint solutions.	Strive for adaptive management of change rather than implementing blueprint solutions.
Institutionalization of Structural Solution	Being caught in endless cycles of unrewarding organizational change.	Stabilize the system through incremental adjustments.
Evaluation of Structural Solution	Overemphasis on either exploitative or explorative contexts over time.	Monitor the company's full portfolio of structural solutions to balance multiple learning processes.

measures included the creation of a dedicated support team and the redesign of the incentive systems to reflect employees' contributions in the parallel structures.

Third, companies need to institutionalise major structural change through a balanced combination of stability and incremental adjustments. The basic structures of the successful analysed companies were highly stable: unlike many of their less successful competitors, the six firms that we observed had undergone no more than two general corporate restructurings within the observed ten-year period. Instead of pursuing a strategy of permanently switching between different primary structures, risking high restructuring costs and a transitional loss of productivity, they focused on fine-tuning their organizations by adding supplementary network structures or creating separate units for specific initiatives at lower organizational levels. They thus obtained the flexibility to facilitate the necessary changes while maintaining their core business's stability, which allowed them to achieve high levels of efficiency.

Finally, the results of our analysis also imply that none of the solutions presented accommodates all of a firm's exploitation and exploration needs. Firms should strive for a balanced portfolio of multiple design options that complement one another by enabling different exploitation and exploration processes. Nestlé, for example, launched both its Corporate Wellness and Nutrition units in 2004. Whereas the Corporate Wellness unit operates as a parallel network to upgrade existing products for new customer groups, the Nutrition unit was established as a separate venture to explore new products and markets. Nestlé deploys the 'multifocal company' strategy to manage this complexity: a wide variety of structural solutions coexisting within the one organization.[25] This approach requires corporate-wide monitoring mechanisms to ensure a balanced portfolio of structural solutions.

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11. The distinction between supply-side and demand-side exploitation and exploration was introduced and thoroughly conceptualized by J. S. Sidhu, H. R. Commandeur and H. W. Volberda, The Multifaceted nature of exploration and exploitation: value of supply, demand, and spatial search for innovation, *Organization Science* **18**(1), 20—38 (2007).
12. Ford and HP are described in Nickerson and Zenger (2002), op. cit. at Ref 8; Ericsson in C. A. Bartlett and S. Ghoshal, Managing Innovation in the Transnational Corporation, in C. A. Bartlett, Y. Doz, and G. Hedlund (eds.), *Managing the Global Firm*, Routledge, London; Sony in V. Gupta and K. Prashanth, *Restructuring Sony*, ICFAI Case Study, ECCH #303-155-1(2004); and ABB in K. Prashanth and V. Gupta, *Reorganizing ABB*, ICFAI Case Study, ECCH #303-156-1 (2003).
13. See also D. Miller and P. H. Friesen, Momentum and revolution in organizational adaptation, *Academy of Management Journal* **23**(4), 591—614 (1980).
14. Our findings are contrary to Nickerson and Zenger's (2002, op. cit. at Ref 8) recommendation that firms should fluctuate frequently, even in the absence of environmental change. Their theoretical model excludes the cost of change, a factor that played a central role in our real-life case examples.
15. See also M. T. Hannan and J. Freeman, Structural inertia and organizational change, *American Sociological Review* **49**(2), 149—164 (1984).
16. For a detailed description of the Nespresso concept, see K. Kashani and J. Miller, *Innovation and Renovation: The Nespresso Story*, IMD Case Study M 543 (2003).
17. By the end of the 1990s BMW Group could be described as 'stagnating' and 'in need of new revenue streams'. It had realized no growth for over five years, had incurred severe losses in 1999 and had sold less than a million cars in 2000, and was actively looking for new growth platforms such as Rolls-Royce to diversify into the luxury segment and MINI to diversify into smaller cars. In the case of Rolls-Royce, BMW had only acquired the brand name, all operational activities having been acquired by VW. Thus, BMW had to set up an entirely new company from scratch, hiring designers, establishing headquarters, building a new production plant etc. In contrast, MINI had been acquired as part of an earlier acquisition — but BMW shut down the existing operation and developed the new model in a newly created network composed of BMW employees and externally hired people. A new production plant was built, managed by BMW employees, and the 'new MINI' was distributed through BMW's sales networks and targeted at a different customer segment. Despite the fact that both these marques had substantial previous histories, the particulars of their 'rebirths' justify this article in dealing with them as effectively 'new' BMW Group initiatives.
18. For more information on Nestlé Nutrition, refer to P. Killing and B. Buechel, *Nestlé: Creating Nestlé Nutrition*, IMD Case Study 3-1667 (2006); and S. Raisch and F. Ferlic, *Nestlé: Sustaining Growth in Mature Markets*, HSG Case Study, ECCH # 306-615-1(2006).
19. For an overview of contextual ambidexterity, see C. B. Gibson and J. Birkinshaw, The antecedents, consequences, and mediating role of organizational ambidexterity, *Academy of Management Journal* **47**(2), 209—226 (2004).
20. While the organizational learning literature has traditionally suggested that exploitation and exploration may be impossible to reconcile within single units, recent studies find that exploration can be compatible with exploitation under specific conditions. For example, see J. H. Ahn, D. J. Lee and S. Y. Lee, Balancing business performance and knowledge performance of new product development: Lessons from ITS industry, *Long Range Planning* **39**, 525—542 (2006).