Strategic Pathways to Cost-Effective Service Excellence

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Abstract

Cost-effective service excellence (CESE) is defined as achieving low unit costs (i.e., high productivity) while at the same time delivering an industry-leading level of service quality (i.e., service excellence). This chapter is based on and extends the article by Wirtz and Zeithaml (2018), and discusses how CESE can be achieved through three strategic pathways. The first is a *dual culture strategy* that provides a comprehensive set of high-quality services at low cost, largely driven by leadership ambidexterity and contextual ambidexterity. The second is an *operations management approach* that reduces process variability and thereby allows increased use of systems, technology, robotics, and artificial intelligence (AI). The third is a *focused service factory strategy* that enables CESE through a highly specialized service operation, typically delivering a single type of service to a highly focused customer segment. These three strategies can be used independently or in certain combinations. This chapter discusses the theoretical underpinnings and workings of these strategic pathways and advances potential future research directions.

Key words: service excellence; productivity; dual culture; ambidexterity; focused service factory.

Introduction

Strategy research widely holds that it is extremely difficult to combine the supposedly incompatible strategies of differentiation (e.g., through service excellence and continuous innovation) and cost leadership (Porter 1980, 1996). Porter argued that it is not possible to do so for a sustained period because dual strategies entail contradictory investments and organizational processes, and the organization risks being "stuck in the middle." Many strategy experts contend that companies must choose between differentiation (e.g., on service excellence) to combat commoditization or cost leadership, which can be used when it is difficult to command an adequate price premium.

The tradeoff between customer satisfaction and productivity has been widely acknowledged in the service marketing and operations management literatures, and it remains a key challenge for organizations to strive for both objectives (Anderson et al. 1997; Rust and Huang 2012). These two objectives conflict because too strong a focus on productivity (often associated with cost reduction) can reduce customer satisfaction, whereas concentration on customer satisfaction may increase cost, thereby reducing productivity (Rust and Huang 2012).

Research in marketing has confirmed that this is, in fact, a tradeoff (Anderson et al. 1997; Rust and Huang 2012; Rust et al. 2002), and it has been shown to be more pronounced in services than in goods, especially when front line employees are involved (Anderson et al. 1997; Marinova et al. 2008; Singh 2000). In addition to the intangibility and variability of services that make them difficult to standardize (Chase 1978, 1981; Frei 2006), perceived quality in services frequently depends on customization desired by consumers. High levels of customization are costly because employees typically play a prominent role in service delivery (Anderson et al.

1997). As expressed by Rust and Huang, "increasing service productivity often involves a tradeoff, with better service typically requiring more labor intensity, lower productivity, and higher cost" (2012, p. 47).

Few service organizations seem to be capable of pursuing a strategy focused on customer satisfaction and productivity at the same time given that they require "distinctive organizational systems, structure, and cultural underpinnings" (Rust et al. 2016, p. 156). Therefore, pursuing a dual strategy combining service excellence and high productivity is likely to be a "daunting task" for most organizations (Mittal et al. 2005, p. 547).

Although the general belief is that this tradeoff holds and that service excellence and cost effectiveness are in conflict, examples can be proffered in which organizations managed to align high productivity and customer satisfaction. For example, the Vanguard Group, a fund and investment management firm, had the highest American Customer Satisfaction Index (ACSI) scores and also the lowest expense ratio of its industry. Ristorante D'O, a Michelin-starred restaurant, was so productive that it could profitably charge only one-third the amount of typical prices in its competitive set. Finally, the National Library Board of Singapore was one of the globally most innovative libraries, having unparalleled member satisfaction while showing the highest labor productivity of its competitors worldwide (Wirtz and Zeithaml 2018). These organizations exemplified *cost-effective service excellence* (CESE) by combining the purportedly incompatible strategies of service excellence and high productivity. CESE refers to a state in which an organization is simultaneously among the best performers in its competitive set, in terms of both customer satisfaction and productivity (Wirtz and Zeithaml 2018).

This chapter builds on an article by Wirtz and Zeithaml (2018) and integrates and synthesizes the literature in marketing, management, and service operations to explain the

strategic pathways by which CESE can be achieved. The potential alignment and conflicts between service excellence and cost-effectiveness are discussed, and potential strategies explore how organizations can mitigate these conflicts. The chapter ends with promising questions for future research.

Service Excellence, Productivity and Organizational Performance

Empirical Research on the Satisfaction-Productivity Tradeoff

Literature in marketing shows empirically that pursuing a customer satisfaction strategy generally improves financial performance (Anderson et al. 1997, 2004; Gupta and Zeithaml 2006; Kamakura et al. 2002; Rust et al. 1995). The services marketing literature uses various terms to describe an organization's focus on delivering customer satisfaction, including revenue emphasis (Rust et al. 2016), customer satisfaction (Anderson et al. 1997; Swaminathan et al. 2014), and effectiveness (Rust and Huang 2012).

A strategy focused on customer satisfaction results in superior risk-adjusted equity returns (Aksoy et al. 2008; Fornell et al. 2006). This occurs largely through the positive effects customer satisfaction has on repeat purchase, cross-buying, referrals (Gupta and Zeithaml 2006; Oliver 2010), reduced customer switching (Wirtz et al. 2014), increased attitudinal loyalty, and reduced price sensitivity (Umashankar et al. 2016; Wirtz, Mattila and Lwin 2007). A number of studies have shown that the relationships between customer satisfaction and its key outcome variables generally follow a positive linear or inverse S-shaped functional form, which is convex at high levels of customer satisfaction (Kumar et al. 2013). Keiningham et al. (2015a, 2015b) showed that the relationship between individual customer-level relative (ranked) customer satisfaction and share-of-wallet follows a Zipfian distribution with sharply increasing share-of-

wallet for firms with higher customer satisfaction rankings. As such, it is important for organizations to be at the leading edge in terms of customer satisfaction and service excellence in their respective industries.

The operations management literature shows that increased productivity generally improves business performance through cost reduction (Breyfogle 2003; Crosby 1979; Deming 1986). The literature uses various terms to describe an organization's focus on productivity, including cost emphasis (Rust et al. 2002, 2016), cost reduction (Mittal et al. 2005), efficiency (Swaminathan et al. 2014), and productivity (Anderson et al. 1997). Productivity is defined throughout this chapter in terms of the output/input ratio (Grönroos and Ojasalo 2004).

Combining the dual foci on customer satisfaction and productivity, service organizations can pursue one of at least three alternative customer satisfaction- and productivity-focused strategies: (1) increase customer satisfaction, (2) increase productivity, and (3) engage in a dual strategy pursuing customer satisfaction and productivity simultaneously. Of the three strategies, empirical evidence suggests that focusing on customer satisfaction has a higher financial return than either focusing on productivity or trying to execute a dual strategy (Rust et al. 2002). Furthermore, the literature distinguishes between organizations that *pursue* a dual strategy and those that *actually achieve it* (Mittal et al. 2005). Empirical findings showed that after organizations successfully achieved a dual strategy they reaped the highest financial returns compared to organizations that focused on either customer satisfaction or productivity alone (Mittal et al. 2005). A dual strategy is clearly desirable but difficult to achieve (Rust et al. 2002).

Root Causes of the Service Excellence and Productivity Conflict

To achieve CESE, root causes underlying the service excellence-productivity conflict must be addressed. There are three key root causes (Wirtz and Zeithaml 2018), which are

detailed in this section.

First, many services are produced through distributed operations with simultaneous production and consumption, as well as customization in real-time at the customer interface (e.g., fast food outlets, hotels, and bank branches can be viewed as mini-factories). Achieving CESE seems particularly difficult for service organizations because having distributed operations makes industrialization, deskilling, economies of scale, productivity, and quality control difficult to achieve (Chase 1978, 1981).

Second, customer-introduced input, process, and output variability have been identified as key limiting factors in increasing productivity. That is, operations cannot be organized and scheduled at optimum efficiency because customer arrival times, product choices, service preferences, and their capabilities, effort, and involvement in the service process vary (Chase 1978, 1981; Frei 2006). Offering sufficient capacity and process flexibility, employee skills, and supplies "on demand" and at high quality is challenging and expensive.

Third, customer experience and satisfaction often depend on the additional three Ps of services marketing: people, process, and physical environment (Booms and Bitner 1981). Furthermore, information technology (IT) is frequently required to connect all parts at the customer interface. Therefore, to deliver service excellence, the functions of operations, IT, marketing, and human resources need to be tightly integrated. This integration frequently leads to tradeoffs between functional objectives, especially between marketing and operations. These tradeoffs are well documented, with marketing typically focusing on service excellence, loyalty, sales, upselling, cross-selling, and market share, whereas operational concerns include unit costs, productivity, and capacity utilization (Lovelock 1992). Striving for CESE must address these three causes of the customer satisfaction–productivity tradeoff.

The Service Excellence, Productivity and Profitability Triangle

Examining the individual relationships between customer satisfaction and productivity one can see that, all else being equal, higher customer satisfaction improves the bottom line through higher loyalty (Mittal et al. 2005; Rust et al. 1995; Watson IV et al. 2015). Similarly, everything else being equal, higher productivity leads to higher profitability through cost reduction (Mittal et al. 2005). However, the relationship between productivity and customer satisfaction is complex because it can be positive, neutral, or negative for a number of reasons.

First, although the relationship between productivity and customer satisfaction can introduce conflict, examples can be proffered where productivity gains and customer satisfaction are aligned. For instance, if customer service processes are redesigned to be leaner, faster and more convenient by eliminating non-value-adding work steps, then productivity and customer satisfaction improve concurrently (Rust et al. 2016). That is, productivity improvements have a direct positive and relatively immediate effect on profitability through cost reductions, and a positive indirect (and typically delayed) effect through enhanced customer satisfaction (Rust, Moorman and van Beuningen 2016). For example, the United Services Automobile Association (USAA) introduced a popular remote check crediting service Deposit@Home. This service allowed customers to take a picture of a check and upload it with a smartphone to instantly deposit the check without having to either mail it or deliver it in person. This process substituted relatively inexpensive and easy-to-use technology for front line employees and physical check processing. In this case, a positive impact on profitability can be expected through increased productivity and increased customer satisfaction.

Second, some quality improvements may not have any implications for productivity (e.g., improving a front office process that does not change its cost) and vice versa for improvements

in productivity in the back office (e.g., using more efficient back office operations that do not have implications for customer touch points). Thus, there is only a positive effect on profitability of such customer satisfaction or productivity improvements. That is, not all quality and productivity improvements necessarily involve tradeoffs.

Third, and in contrast to the prior discussion, if productivity improvements result in changes in the service experience that customers find sufficiently poor (e.g., replacing a human agent in a customer contact center with an interactive voice response system to reduce headcount, increasing group sizes in a child care center, or reducing the frequency of trains to increase load factors), then a trade-off is to be expected. This means that these productivity improvements have a positive direct effect on profitability, but also a negative indirect effect through reduced customer satisfaction. If the cost savings from productivity enhancements are more than offset by revenue and contribution losses through decreased satisfaction, the net effect is negative (c.f., Rust and Huang 2012).

Service quality improvements often result in lower productivity owing to "better service typically requiring more labor intensity, lower productivity, and higher cost" (Rust and Huang 2012, p. 47). This trade-off is common in service organizations (Rust and Huang 2012). That is, investments in quality can only have a positive financial return if the financial benefits resulting from increased satisfaction exceed the costs of achieving the higher quality level (Rust, Zahorik and Keiningham 1995).

In summary, the relationship between productivity and customer satisfaction enhancements can be positive, neutral, or negative. If it is neutral or positive, the net effect on profitability is positive. If productivity and quality improvements are in conflict, the net effect on profitability depends on the relative strengths of the effects on profitability. This micro-level

perspective offers a more differentiated view of the empirical findings related to the productivity-customer satisfaction trade-off. In particular, it shows that customer satisfaction and productivity are often positively aligned or do not affect each other, whereas the tradeoff relates only to those situations where there is direct conflict. The remainder of this chapter provides guidance on how to mitigate such conflicts.

Framework for Strategic Pathways to Achieve CESE

The following sections discuss and synthesize relevant streams of the marketing, management, and operations literature that relate to the constructs service productivity, excellence, and profitability. Two main streams of literature are particularly relevant. The first, on organizational ambidexterity, is rooted in the management literature and explores how organizations can simultaneously pursue and integrate different, often conflicting objectives. The second stream is based on the operations management literature, and tackles the root causes of low productivity in service operations, offering potential solutions. Integration of the literature suggests three specific pathways organizations can pursue to achieve CESE: dual culture strategy, operations management approach, and the focused service factory strategy (Wirtz and Zeithaml 2018).

The pathways to CESE are illustrated in the following sections with case examples drawn from Wirtz and Zeithaml (2018). These examples were among the leading organizations in their respective industries in both service excellence and productivity. Wirtz and Zeithaml (2018) coded each organization on use of the key CESE strategies, and they serve as illustrations in the following sections. Figure 1 synthesizes the coding into core strategies and observed combinations; Figure 2 provides an overview of the three core strategies available to

organizations that want to achieve CESE. The remainder of this chapter describes these approaches in the context of their respective literatures.

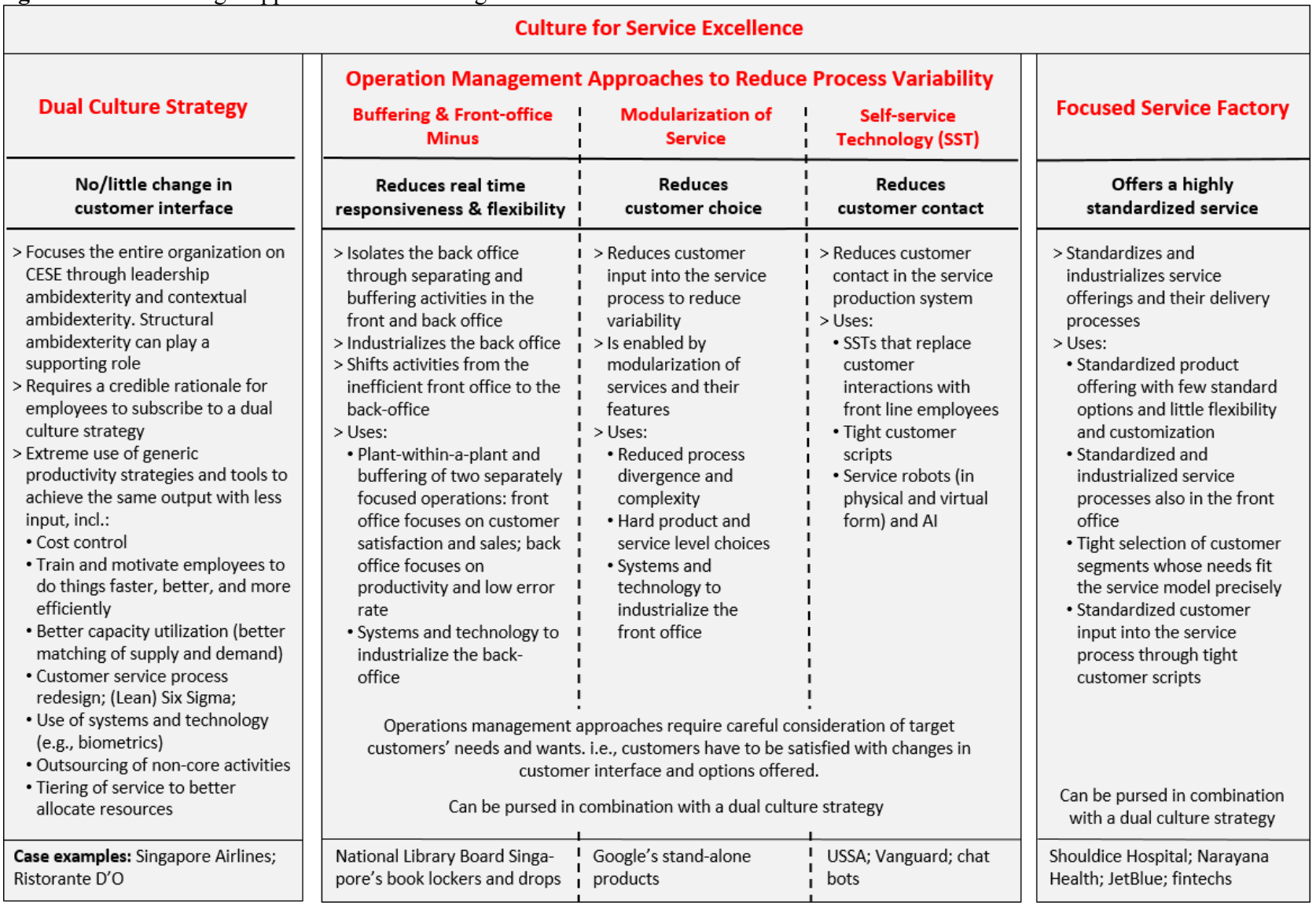
Figure 1: Observed constellations of CESE strategies

Organizations	Dual Culture Strategy	OM Approaches	Focused Service Factory
Singapore Airlines, Ristorante D'O	●	○	○
National Library Board Singapore, Google, USAA	○	●	○
Shouldice Hospital, JetBlue	○	○	●
Vanguard, Amazon	●	●	○
Narayana Health	●	○	●

Use of Strategies/Tools: ● Extensive ○ Little/Not at all

Note: Coding is relative to the respective industry an organization operates in.
This figure is based on the case analysis reported in Wirtz and Zeithaml (2018).

Figure 2: Three strategic approaches to achieving cost-effective service excellence



Adapted from Wirtz and Zeithaml 2018.

Dual Culture Strategy

The dual culture strategy uses organizational ambidexterity to drive the deployment of generic productivity strategies and tools to the extreme. At the same time, this strategy is exceedingly customer centric and also focuses on service excellence.

Organizational Ambidexterity

In management, the pursuit of conflicting organizational goals has been studied in the ambidexterity literature. 'Ambidexterity' describes how organizations are able to simultaneously pursue courses of action along different, often conflicting dimensions. Robust findings link organizational ambidexterity to improved financial performance (O'Reilly III and Tushman 2013). Dimensions that have been studied include exploitation (e.g., enhancing cash flows through fine-tuning of current operations), exploration (e.g., R&D to develop a new generation of break-through products), incremental versus radical innovation, continuous versus radical change, and efficient versus flexible organizational structure (for a review, see Raisch and Birkinshaw 2008). However, cost-effectiveness versus service excellence has not yet been examined in the management literature, and this is the focus of this section.

To be ambidextrous, organizations must resolve internal conflicts for resources as well as shift demands in their task environments. Although earlier studies viewed these tradeoffs as insurmountable, more recent research has presented three organizational approaches to support ambidexterity (Benner and Tushman 2003; Raisch and Birkinshaw 2008). First, *leadership ambidexterity* can enable organizations to manage conflicting demands (Lubatkin et al. 2006; Smith and Tushman 2005). Paradoxical senior management frames lead to a "both/and logic" rather than an "either/or logic" (Collins and Porras 1994, pp. 43–45; Smith et al. 2016). This view enables positive conflict and allows leaders to embrace rather than avoid contradictions

(Smith and Tushman 2005). Leaders then play a critical role in putting the systems in place that allow supportive contexts for ambidexterity to emerge; they focus and energize the organization on these key ideas, role model the desired ambidextrous behaviors, and reinforce them with rewards and recognition (Gibson and Birkinshaw 2004).

Second, *contextual ambidexterity* involves achieving alignment and adaptability by pushing the integration of conflicting goals to the individual employee (Gibson and Birkinshaw 2004, p. 209). Individual-level behavior is then shaped by the context (i.e., systems, processes, and beliefs), which is designed to enable and encourage individuals to exercise their own judgment in dealing with conflicting demands (Gibson and Birkinshaw 2004). Third, *structural ambidexterity* involves separating organizational units to allow units with different competencies to address inconsistent demands (Benner and Tushman 2003; Gibson and Birkinshaw 2004).

Wirtz and Zeithaml (2018) advanced the idea that an organization's simultaneous focus on service excellence and cost-effectiveness is akin to other potentially conflicting goals studied in the organizational ambidexterity literature. Specifically, and as discussed next, they found that leadership ambidexterity and contextual ambidexterity were both pursued in all dual culture organizations examined; however, structural ambidexterity, which arguably received the most attention in the management literature, featured least prominently.

Dual Culture Focused on Service Excellence and Cost Effectiveness

Wirtz and Zeithaml (2018) used the lenses of leadership, contextual, and structural ambidexterity, to examine how ten case organizations achieved CESE. All ten organizations focused on service excellence, but only five pursued dual culture strategies, in which they consciously drove foci on both service excellence and productivity. The literature uses various terms similar to 'dual culture strategy,' including 'dual strategy,' 'dual emphasis' (Rust et al.

2016; Mittal et al. 2005; Swaminathan et al. 2014), and 'simultaneous attempts to increase both customer satisfaction and productivity' (Anderson et al. 1997). In this chapter, the term 'dual culture strategy' is used throughout.

The Roles and Interplay of Three Types of Ambidexterity

Leadership ambidexterity, the first dual culture approach, requires that *leaders* push and even rally their organizations to pursue the dual culture, which is typically done through internal communications, training, and incentives (Gibson and Birkinshaw 2004). For example, Jeff Bezos, the CEO of Amazon, was known to put the needs of customers first; he was infamous for becoming enraged upon receiving customer complaints, requiring that anxious employees find solutions immediately. At the same time, he role-modelled and communicated frugality on anything that did not touch the customer (Stone 2013, p. 330–331). "Customer obsession" and "frugality" were core values at Amazon (Stone 2013, p. 88). John Bogle, the founder and former CEO of Vanguard, emphasized the organization's strategy to "provide the highest quality of investor services, at the *lowest possible cost* [sic]" (Bogle 2002, p. 138). Vanguard emphasized frugality even when recruiting, by looking for team members who "understand and sympathize with the need for frugality" (Heskett et al. 2015, p. 77).

Dr. Devi Shetty, founder and chairman of Narayana Health, stated, "The notion that 'if you want quality, you have to pay for it' went out the window a long time ago at Narayana Health" (Global Health and Travel 2014, p. 44). Senior employees received daily text messages detailing the previous day's expenses, to drive cost consciousness and motivate team members to generate cost saving and process improvement ideas (Anand 2009; Govindarajan and Ramamurti 2013). Chef Davide Oldani, founder and head chef of Ristorante D'O, was passionate about keeping prices low, in order to make the Michelin-starred restaurant accessible to a broad

audience; he constantly communicated this to his team (Cheshes 2015; Pisano 2013).

As a final example, Singapore Airlines' leadership, internal communications, and training continuously emphasize that profit is a function both of service excellence (which drives the loyalty of demanding business travelers, its core target segment) and costs (the other side of the profit equation). To reinforce that message, Singapore Airlines offered bonuses to all employees depending on the airline's profitability, but also cut base pay by as much as 20 percent when it had losses. The result was a culture that became exceedingly customer-centric and that internalized the idea that anything that touched the customer must be consistent with Singapore Airlines' premium positioning. On the other hand, everything behind the scenes was subject to extreme cost control, with employees focusing intensely on managing costs and improving productivity (Heracleous and Wirtz 2010, 2014).

Contextual ambidexterity is apparent in many of the dual culture strategy organizations; it governs employee thinking and decision making about when to focus on service excellence, when to emphasize cost-effectiveness, and ideally, how to integrate both objectives synergistically. Often, both objectives are aligned and can be pursued simultaneously, but sometimes tradeoffs have to be made. Employees need to know how to make such decisions, and an internalized dual culture provides this governance mechanism. Using Singapore Airlines as an example again, Krug Grande Cuvée and Dom Pérignon were served in first class. To minimize costs, cabin crews offered whichever bottle was open unless a passenger specifically requested the other brand. No cost was considered too small to reduce (Heracleous and Wirtz 2010, 2014).

Narayana Health had an intense focus on surgery quality and success rates. However, its surgeons constantly compared and generated ideas across their network on how to cut costs, such as through the routine reuse of medical devices that were sold as single-use products. For

example, the $160 steel clamps that were employed during open-heart surgeries were sterilized and reused up to 80 times (Govindarajan and Ramamurti 2013).

Similar observations can be made at Amazon and Vanguard, where tradeoff decisions were pushed to decision makers to integrate the conflicting objectives. As stated in Amazon's leadership principles: "Frugality – We try not to spend money on things that don't matter to customers. Frugality breeds resourcefulness, self-sufficiency and invention" (Stone 2013, p. 330). As these examples show, leadership and contextual ambidexterity seem to go hand-in-hand.

Structural ambidexterity can play a supporting role in achieving CESE. For example, Singapore Airlines invested heavily in a centralized innovation department, a separate unit that developed its next industry-leading inflight service products (Heracleous and Wirtz 2010; Tuzovic et al. 2018).

In summary, organizational ambidexterity can help to implement a CESE strategy. The mechanisms for achieving organizational ambidexterity (i.e., leadership, contextual, and structural ambidexterities) allow firms to simultaneously achieve service excellence and cost effectiveness.

CESE-Specific Departures from the Ambidexterity Literature

Wirtz and Zeithaml (2018) observed three interesting differences in the CESE context from the traditional ambidexterity literature in management. First, it seems that all departments (albeit with different emphases) must be involved in supporting a dual culture, which differs from the traditional view of structural ambidexterity in the management literature (c.f., Gibson and Birkinshaw 2004). For example, Singapore Airlines' centralized innovation department not only focused on service and inflight product innovation but also rigorously emphasized costs.

When the company launched the widest business class seat in the industry, it was designed in a way that 'wowed' travelers: the seat could be flipped over and turned into a flat bed with a duvet and bigger pillows. Because the "flipping" was done manually, the number of heavy and engineering-intensive motors in a seat was reduced and provided significant savings in fuel, repair and maintenance, and purchase costs (Heracleous and Wirtz 2010; Tuzovic et al. 2018).

Although not completely separated structurally, dual culture organizations typically distinguish between the customer-facing front office and the back office. The front office is generally more focused on customer- and service-excellence than is the back office. Even at Singapore Airlines, the cost squeeze was less intense when related to inflight service excellence and cabin crew, who had extensive training, reasonable travel allowances, and expensive uniforms. In the back office, Singapore Airlines drove distributed innovation throughout the organization. As the departments were largely not customer-facing, their foci tended to be on cutting labor and costs. But again, potential customer impact was always considered, so that service excellence would not be compromised (Heracleous and Wirtz 2010; Tuzovic et al. 2018). The front and back offices were both customer-centric and cost-conscious at the same time, and the cost- and service-excellence foci differed only in degree and not in substance. In sum, while structural ambidexterity can have a supporting role, it is unlikely to be a key enabler for CESE.

The focus on service excellence, although difficult to achieve, is a corporate mission that is more attractive to employees than one focusing on cost-cutting and frugality. It is easier to establish buy-in from employees for the former, perhaps because they feel pride in being associated with an excellent organization (Gouthier and Rhein 2011). However, when asked to be cost-effective at the same time, employees tend to find this mission difficult to accept. That is, high productivity and cost effectiveness combined with customer centricity can put a strain on

employees. For example, in spite of Amazon's top American Customer Satisfaction Index (ACSI) ratings, it did not appear anywhere on the lists of best companies to work for and was even accused of achieving its high level of productivity by squeezing employees (Nocera 2015).

In the organizations described in Wirtz and Zeithaml (2018), employee strain was mitigated by emphasizing various rationales for expecting cost effectiveness and service excellence at the same time, to obtain employee buy-in. Examples included a mission to provide the best customer value (Amazon), appreciation that employees are working for members (Vanguard), making Michelin-starred food affordable (Ristorante D'O), and supporting a charitable cause (Narayana Health). It seems that a dual culture strategy requires a strong rationale for employees to accept that cost effectiveness is critical, in addition to providing service excellence. That is, employees seem to need a credible 'rallying cry' to be willing to subscribe to a dual culture strategy.

In summary, it is apparent that CESE permeates the entire organization and is more complex than the typical exploration and exploitation conflict studied in management. Furthermore, the finding that leadership ambidexterity was present in all dual culture organizations studied by Wirtz and Zeithaml (2018) is consistent with work by Rust et al. (2016), who found that firms that are successful in their cost emphases tend to have it pushed down from the top. To accomplish the dual goals, senior management must build a culture of cost-consciousness and intense service excellence simultaneously (Mittal et al 2005; Anderson et al. 2004).

Dual Culture as Driver of Generic Productivity Strategies and Tools

The operations management literature distinguishes between actual and potential efficiencies at a given level of variability. It identifies variability in terms of input (e.g., customer

arrival patterns), process (e.g., customer process preferences), and output (e.g., customer requests) as the key factors that determine the potential level of efficiency (Chase 1978, 1981). Service organizations that want to improve efficiency can reduce the gap between their actual and potential levels of efficiency at the current level of variability (Wirtz and Zeithaml 2018). Generic productivity strategies and tools for implementing them include cost control, waste reduction, training and motivation of employees (to do things faster, better, and cheaper), improved capacity utilization, redesign of customer service processes (Breyfogle 2003; Crosby 1979; Deming 1986; Wirtz 2018), outsourcing of non-core activities (Wirtz et al. 2015), and service tiering to allocate resources to more important customers (Frei 2006).

These strategies keep the current business model unchanged and adopt best practices to achieve the same output—a largely unchanged customer experience—with less input. However, the service operations management literature is not typically concerned specifically with service excellence, and generic productivity strategies in themselves do not necessarily lead to service excellence. Therefore, a culture of service excellence is also required. Integrating these two literatures, it can be argued that a dual culture strategy allows organizations to drive generic productivity tools to the extreme (Heracleous and Wirtz 2010, 2014), such that employees focus on closing the gap between potential and actual efficiencies while maintaining service excellence.

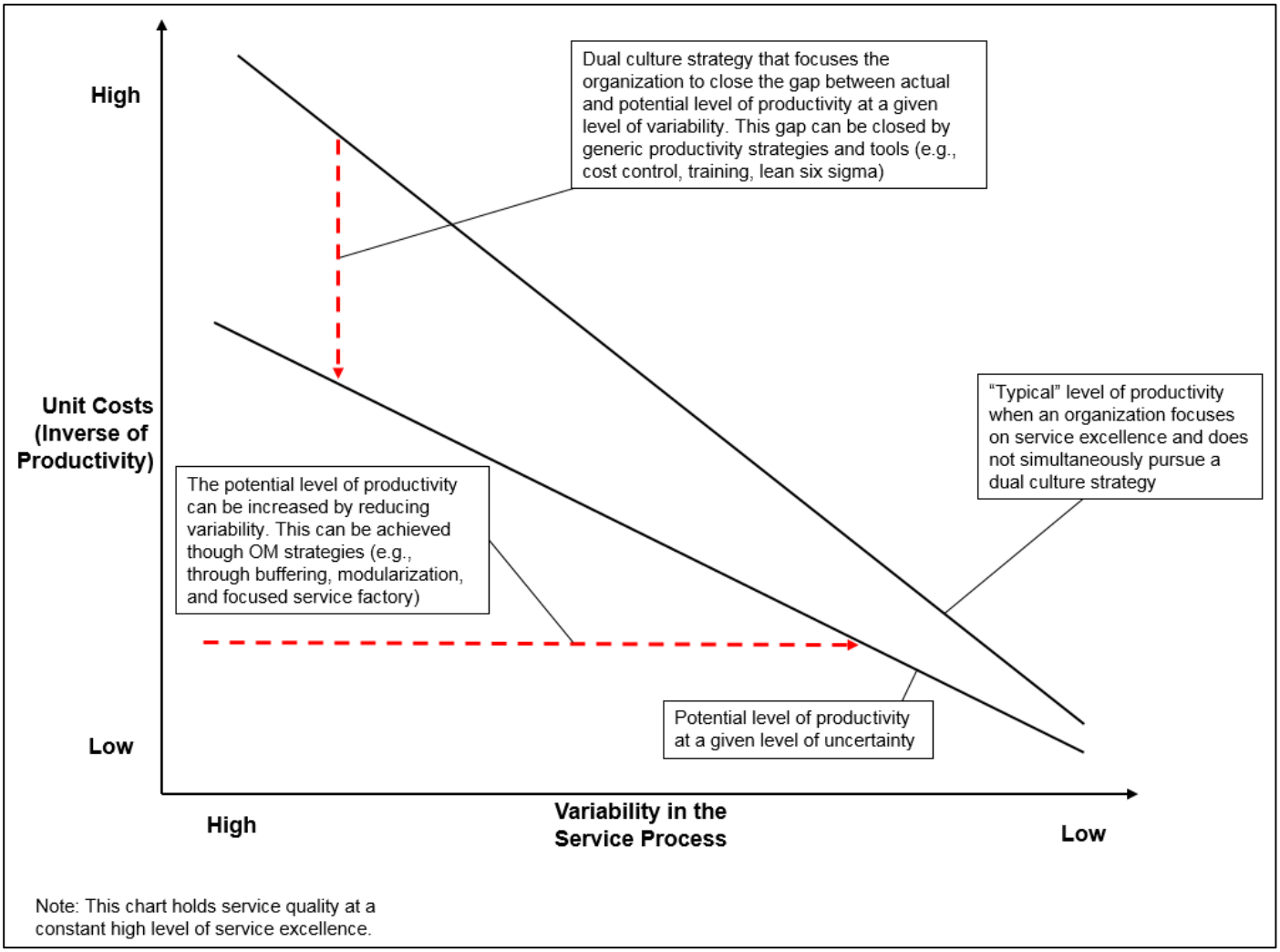
Dual culture organizations must be masters of using generic productivity strategies and tools to cut costs and boost productivity, while managing for service excellence. All five of the case organizations studied by Wirtz and Zeithaml (2018) that pursued a dual culture examined every aspect of their operations to reduce costs, and used the full gamut of management, operations, and technology tools to boost productivity. For example, Ristorante D'O examined

every aspect of its restaurant operations to reduce costs. It introduced multi-tasking (with the chefs serving the food so they did not have to employ waiters), leading to a significant reduction in labor costs. It chose glasses and plates that withstand breakage to reduce replacement costs. It located in a low rent area (situated 20 km away from the city, where rent was estimated to be half of that for restaurants in the center of Milan) and ran at a 100 percent capacity utilization for one lunch and two dinner shifts to reduce unit costs rather than having only one dinner seating, as is typical for Michelin-starred restaurants (Pisano et al. 2013; Pisano 2013).

In summary, dual culture strategy refers to organizations that achieved CESE through ambidexterity (i.e., leadership, contextual, and structural ambidexterity), making both service excellence and productivity integral parts of the organizational culture. A dual culture strategy enables organizations to deploy generic productivity strategies and tools to the extreme, and to minimize the gap between actual and potential efficiencies at an excellent level of service at a given level of process variability.

An additional observation is that organizations can increase their potential efficiencies by reducing process variability. This allows organizations to deploy specialization and industrialization tools (Frei 2006; Levitt 1972, 1976). The resulting interplay between closing the gap (between actual and potential levels of efficiencies) at a given level of uncertainty, and increasing the level of potential efficiency through variability reduction is synthesized in Figure 3. The next section explores how variability can be reduced to increase the potential level of efficiency.

Figure 3: Productivity as a function of process variability at a constant level of service excellence



Operations Management Approaches to Reducing Process Variability

Much of the service operations management literature centers on how organizations can increase their levels of efficiency by reducing customer-induced variability. The term 'customer-induced uncertainty' was used in early service operations research to discuss efficiency-related challenges in service organizations (Chase 1981). More recent work uses the term 'variability' (e.g., in arrival times and service requests) (Frei 2006), although in marketing, variability typically relates to customization (e.g., Anderson et al. 1997). For simplicity, this chapter refers to customer-induced uncertainty, variability, and customization as 'customer-induced variability.'

From a cost-effectiveness point of view, approaches to reducing customer-induced variability require a reduction in process flexibility that involves changes both in customer behavior (e.g., giving customers a tighter script, which makes them an integral part of the service process) and customer choice (e.g., offering modular options rather than full customization). The key approaches advanced in the literature are: (1) isolating and industrializing the back office, and shifting activities from the expensive front office to the mechanized back office (Chase 1981), (2) modularizing service through reduced customer choice (Chase 1978; Frei 2006; Shostack 1987), and (3) deploying self-service technologies (Meuter et al. 2000, 2005). Such strategies reduce process variability and, therefore, potential conflicts between productivity and service excellence. The three approaches to reducing customer-induced variability are discussed next.

First, low customer contact systems are easier to industrialize (Chase 1978, 1981), and decoupling and buffering the 'technical core' (i.e., back office) from the front office allows higher productivity in the back office, as it can operate without customer-induced variability

(Chase 1981). Firms can then operate the back office in a much more cost-effective manner by deploying technology and systems, leading to a reduction of fluctuations in capacity utilization. The back office can focus on productivity and process quality, and the front office can focus on customer satisfaction and sales. This 'plant-within-a plant' approach generally results in overall higher productivity and better service quality. However, decoupling can affect the customer experience, as buffered activities move from real-time interactions between the front line and customers, to offline transactions executed by the industrialized back office.

Second, a buffered and reduced front office can be further simplified (and variability lowered) by reducing customer choice, interaction flexibility, and contact in the front office through modularization of service, allowing an increased deployment of systems and technology in the front office (Chase 1978, 1981; Frei 2006). Furthermore, reducing complexity (i.e., number and intricacy of the steps involved) and divergence (i.e., executional latitude customers and employees have available) can reduce variability and lead to uniformity enabling higher productivity, but doing so also reduces customization and customer choice (Shostack 1987).

Finally, when processes and products have been modularized and have low complexity, the deployment of self-service technologies (SSTs), robotics, and AI become easier. These technologies provide opportunities for increasing service productivity (Frei 2006; Meuter et al. 2000, 2005; Wirtz et al. 2018). However, deploying such technologies and systems, including web- and app-based services and approaches to co-creation, can have a significant impact on the customer experience and require careful management of customer behavior (Collier and Sherrell 2010; Lovelock and Young 1979; Meuter et al. 2005; Wunderlich et al. 2012).

Although in theory these three approaches could be pursued in isolation, they tend to build on one another. For example, the National Library Board of Singapore had extensive

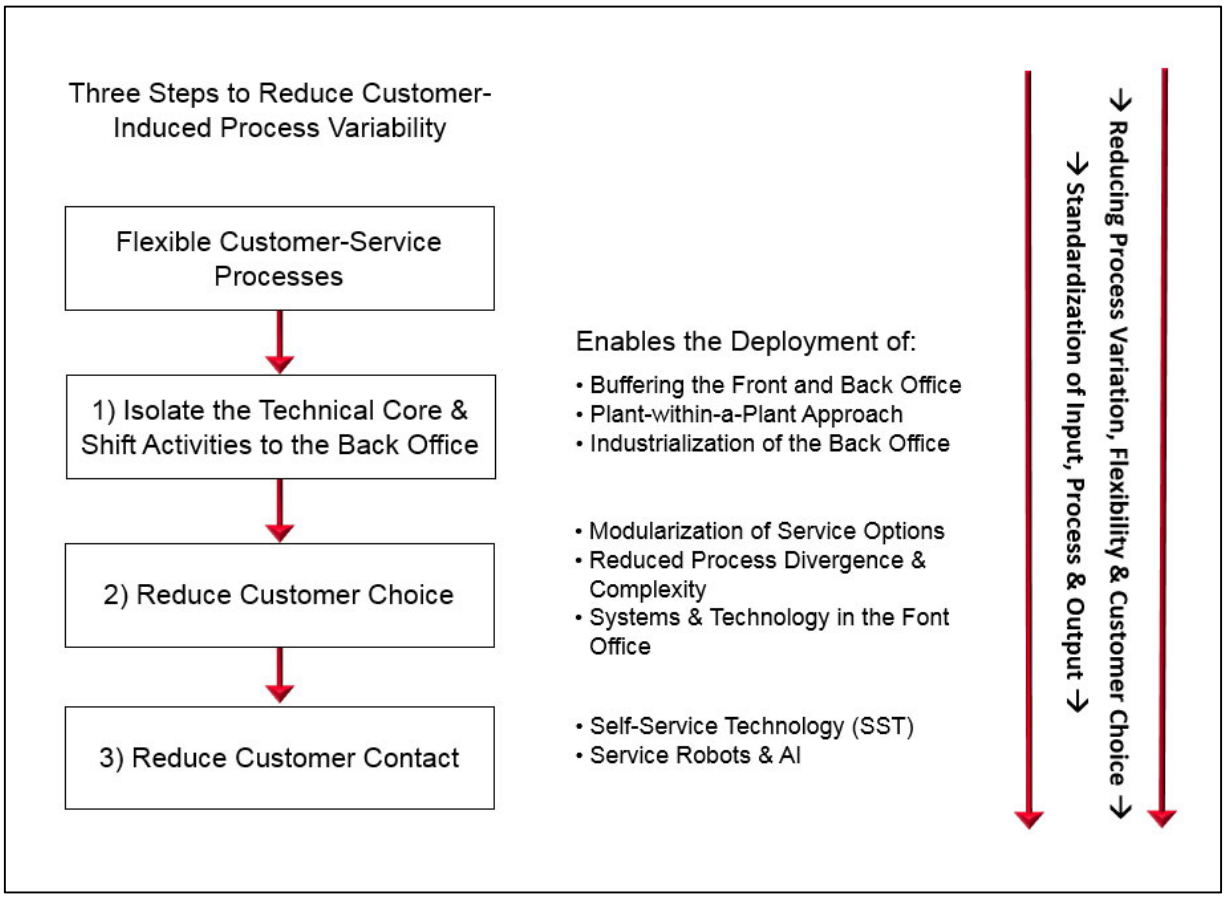
physical customer–organization contact. Buffering front office activities from the back office (e.g., book drops, RFID-enabled dropping of books into mailboxes of Singapore Post, auto-sorting systems, and robot-assisted shelf-reading) all helped to reduce waiting times, improved availability of titles, and enhanced convenience. Modularizing the service (e.g., payment was accepted only through a low-fee cashless system) enabled the pervasive deployment of SSTs. The National Library Board's heavy focus on SSTs resulted in constant experimentation and innovation (e.g., with app-delivered services, digital services, and self-service reservation systems via lockers), and it became a globally leading library in terms of SST deployment (Menkhoff and Wirtz 2018).

Vanguard too decoupled its customer-service processes, modularized them, and then moved them to self-service platforms. It had no branches and relied almost entirely on the Internet, apps, phone, and mail to interact with its customers. The result was that the typical Vanguard client required little direct contact with the organization (Heskett et al. 2015, p. 78). Even personal interactions were augmented through technology. For example, its Personal Advisor Service used analytics to match a client's investment strategy with his/her financial goals, which dramatically reduced the time needed to serve a client while enhancing advisory quality (Sunderam et al. 2016).

Amazon reduced its front office to a minimum. Its business model was built on use of the Internet, with a pervasive use of SSTs (e.g., search, selection, payment, account management, and reviews) facilitated by modular services (i.e., highly structured processes with a few, clear options) and powerful analytics (e.g., for making recommendations). It had an almost completely buffered and industrialized back office that could run highly efficient fulfilment services (McGee et al. 2017; Peters 2006; Stone 2013).

In summary, three key operations management based approaches increase efficiencies by reducing customer-induced process variability and the related conflicts between productivity and service excellence. Unlike a dual culture approach, operations management based approaches require changes in the customer interface and tend to reduce customer choice, interaction flexibility, and contact. Finally, the three operations management based approaches create a natural flow of steps from (1) isolating and industrializing the back office, and shifting activities from the expensive front to the mechanized back office, to (2) modularizing service, and to (3) using SSTs, robots and AI, whereby each step eases the implementation of the next and leads the approaches to be used in tandem (see Figure 4).

Figure 4: Operations management approaches for achieving CESE



Focused Service Factory Strategy

It is typically more costly to satisfy heterogeneous than homogeneous customer preferences (Fornell 1992). One way to drastically increase productivity and customer satisfaction simultaneously is to tailor a single solution to meet the exact needs of a specific segment. This approach draws from the focused factory, which typically delivers a single product to a homogeneous segment (Skinner 1974). Simplicity, repetition, homogeneity, and experience in a focused factory breed competence and the "focused factory will out produce, undersell, and quickly gain competitive advantage over the complex factory" (Skinner 1974, p. 116). A focused factory is even more effective in a service context, with its distributed

operations, customer-induced variability, and need for functional integration.

Levitt (1972, 1976) extended the idea of the focused factory to high-volume services delivered through highly predictable systems that allow industrialization of services through planned, controlled, and automated processes. Tightly integrated hard, soft, and hybrid technologies together replaced labor and reduced its skill requirements, leading to high levels of productivity and consistency in quality. That is, "everything is built integrally into the machine itself, into the technology of the system" (Levitt 1972, p. 46).

For example, Narayana Health focused on cardiac surgeries. It operated a focused service factory and, compared to general hospitals, pursued a highly targeted business model. Narayana Health's focus enabled it to concentrate on surgery quality and innovation (e.g., it pioneered 'beating open heart surgery') (Global Health and Travel 2014). Centralization of surgeries in a few hospitals (with larger facilities) allowed concentrated utilization and low unit costs, and drove learning and innovation. The volume of similar surgeries enabled detailed analyses and continuous improvement. Doctors received comparative performance data for 22 hospitals, including their own, encouraging them to share best practices. The high volume enabled Narayana to drive a hard bargain, especially for equipment and consumables (Global Health and Travel 2014; Govindarajan and Ramamurti 2013).

Another example of a focused service factory company is JetBlue, which offered low-cost, high-quality, operationally simple, point-to-point airline service. Its focused operations are supported by a young fleet of limited aircraft types, resulting in low maintenance costs. The airline also operated longer-haul overnight flights to increase aircraft utilization. Its operating model resulted in low cost per seat mile but delivered higher quality service than full service airlines and other low-cost carriers (Harris 2015; Smyth and Pearce 2006, p. 18; Trefis Team

2015). Finally, many app-based and online services follow a focused service model, whereby they offer highly standardized and tightly designed solutions to narrowly-defined customer segments. Examples include fintechs that address specific financial needs (e.g., travel insurance and international money transfer).

In summary, the focused service factory serves the largely homogeneous needs of a tightly-defined target segment. The resulting low variability in its operations enables these organizations to achieve both service excellence and high productivity.

Summary and Discussion

This chapter discussed three strategic pathways to CESE as outlined in the conceptual framework shown in Figure 2.

The first pathway is an organizational strategy called 'dual culture strategy.' It focuses the entire organization on the simultaneous pursuit of service excellence and productivity. The dual culture strategy aims to provide high levels of service (including costly customization) at top quality and low cost. The service offering is wide, processes are not highly structured or standardized, and customer service is flexible and customized. This type of full service is typically expensive and inefficient to deliver. The dual culture strategy is akin to ambidextrous organizational approaches in the management literature (Raisch and Birkinshaw 2008) with a focus on leadership ambidexterity (Smith et al. 2016; Smith and Tushman 2005) and contextual ambidexterity (Gibson and Birkinshaw 2004).

The organizations that successfully achieve a dual culture strategy combine an intense focus on costs with equally passionate customer centricity and focus on service excellence. Specifically, they show an extreme deployment of generic productivity strategies and tools that

allow them to minimize the gap between actual and potential efficiencies in a given service operation, while delivering service excellence. Such strategies push customer satisfaction and productivity towards best practice and the organizations have cultures that drive employees to integrate customer satisfaction and productivity when there are conflicts. Furthermore, the dual culture approach requires a rationale employees can buy into, as it seems counterintuitive to offer great service externally, but be stingy internally. Being cost conscious (especially on employee salaries and benefits) must be sold effectively to employees.

The second strategy, the operations management approach, addresses the root causes of inefficiencies in service processes through operations management approaches that reduce customer-induced variability and thereby reduce potential conflicts between productivity and service excellence. This approach deploys a combination of operations management tools that are used to reduce process variability so that systems and technologies can be increasingly deployed to deliver CESE. The tools include (1) isolating and industrializing the back office and reducing the front office by shifting activities to the industrialized back office, (2) modularization of service, and (3) SSTs, robotics, and AI. Unlike dual culture approaches, operations management approaches typically require some degree of change in the customer interface.

The third strategy is a focused service factory that achieves CESE through a highly specialized operation, typically delivering a single type of service to a highly focused customer segment. The focused service factory features tightly-defined and industrialized service processes targeted at a highly homogeneous customer base. As a result, it delivers reliably exactly what its target customers want. It also reduces customer-induced variability to a minimum—customers tend to receive a single, highly standardized, and excellent service

offering.

Implementation of CESE Strategies

Of the three core strategies, the dual culture strategy seems the hardest to execute. Service excellence is a natural focus of service employees (Gouthier and Rhein 2011), but cost-effectiveness is a harder sell to them. A dual culture approach requires that senior management has a convincing narrative as to why a cost focus is necessary. Senior management must drive cultures of cost-consciousness and service excellence simultaneously, which is difficult (Mittal et al. 2005). However, intensifying competition and cost pressures increasingly push organizations to seek new ways to increase efficiencies while maintaining high levels of quality. There is a palpable shift across many industries toward best practices, which typically involve a rigorous application of generic productivity strategies; a dual culture strategy may be a promising approach to moving actual efficiency levels closer to their potential.

As organizations pursue an operations management or focused service factory strategy, the systems and technology can increasingly hardwire productivity and cost-effectiveness into the business model, and employees can focus on service excellence without having to focus so heavily on costs and incremental productivity gains. This makes operations management approaches and focused service factory strategies easier to implement than a dual culture strategy.

Combining CESE Strategies

Conceptually, one could expect the three CESE strategies to be used in a modular manner that allows a mixing and matching of tools, while placing different degrees of emphasis on each, depending on the industry context and organizational objectives. However, examining Figure 1 suggests that the three core strategies can each stand alone. It is also possible for the operations

management approaches and the focused service factory strategy to be combined with a dual focus strategy (Wirtz and Zeithaml 2018).

It is noteworthy that none of the configurations show a combined operations management and focused service strategy approach. Perhaps the operations management and focused service strategy both deliver a reduction in customer-induced variability so that their combination would not result in substantial sufficient incremental productivity gains. For example, organizations such as Google and Amazon have such highly standardized processes that pursuing the focused service factory strategy may not add substantial efficiency gains through a reduction in customer-induced variability.

The incremental productivity gains a dual culture strategy can offer seem to be reduced in organizations that have already implemented either the operations management approaches or the focused service factory strategy, as compared to organizations that do not pursue either of these two strategies. A full-service business model, such as that of Ristorante D'O, must painstakingly identify and implement efficiency gains and cost savings in all its operations. In contrast, an organization that follows the focused service factory strategy already has dramatic cost savings from the business model itself, and the incremental savings of a dual culture tend to be small (see Figure 3). For example, Google was well known for its positive treatment of employees, offering high pay, free meals, sports facilities, and even massages (Groysberg et al. 2011; Schmidt and Rosenberg 2014, p. 125-127). However, whether Google's employees enjoyed free massages and meals did not much affect the cost per transaction. This intense focus on scalable SSTs allowed it to be generous to its comparatively small number of employees, virtually all of whom were involved in the creation of new services rather than in providing customer service.

However, if several players pursue a focused service factory strategy, an additional dual culture strategy may be required to achieve cost leadership. For example, when Southwest Airlines was the only low cost carrier in the passenger air travel market, it had by far the lowest operating cost in its competitive set (Lovelock 1994, p. 78–84). As more players entered the low cost carrier market, the benchmark shifted, and greater cost discipline was needed in order to be the most efficient player, leading back to a dual culture strategy.

Customer-Induced Variability as a Strategic Decision

The level of variability allowed in customer service processes and the resulting business model is a strategic decision. If a business model keeps variability high, it requires an extraordinary effort to achieve CESE largely through leadership ambidexterity and contextual ambidexterity to successfully execute a dual culture strategy. It is possible that variability can be reduced either on the process side through operations management approaches, or on the customer input side through the focused service factory strategy. These alternatives imply very different business models with different value propositions and customer segments.

Even within a given business model, service organizations need to be intensely aware of the cost implications of providing options, flexibility, customization, and added products and features to their customers. Complexity and variability grow exponentially and thereby reduce the level of potential productivity, while making it more difficult to deliver excellence (Shostack 1987). Therefore, it is an important strategic decision how much variability a business model should contain.

The focused service factory model offers many interesting business opportunities in both the offline and online worlds. Focused service factories typically combine smart processes and new technologies that provide tailored solutions for well-defined problems and narrowly defined

customer segments (Frei 2006; Levitt 1972, 1976). For example, in healthcare, Narayana Health decided against building a general hospital that intertwined many service processes and patient segments, and therefore would have been incredibly complex and expensive without the same quality output (Global Health and Travel 2014; Govindarajan and Ramamurti 2013). The principle is simple – a specialist who only delivers a single product to a single segment will be better and have lower costs than the generalist who must cater to a wide range of customer needs.

The Industrialization of Service

The service sector appears to be at an inflection point with regard to productivity gains and service industrialization, similar to the industrial revolution in manufacturing that started in the 18th century (Wirtz and Zeithaml 2018). Rapidly developing technologies that become better, smarter, smaller, and cheaper are transforming virtually all service sectors. Especially exciting are the opportunities offered by developments in robotics, AI, big data, analytics, the Internet of Things, geo tagging, virtual reality, speech recognition, and biometrics. These technologies will lead to a wide range of service innovations that have the potential to dramatically improve the customer experience, service quality, and productivity simultaneously. What happened in information processing services through websites, apps, and mobile technologies seems ready to happen next for people and possession processing services; self-driving cars, drone-delivery, and largely robot-staffed hotels and restaurants will only be the beginning of this revolution.

Robot- and AI-delivered service is likely to show unprecedented economies of scale and scope as the bulk of the costs are incurred in their development. Physical robots cost a fraction of adding headcount, and virtual robots can be deployed at negligible incremental costs. For example, a holograph-based humanoid robot providing service at an information counter will

require only low-cost components (e.g., a projector, speaker, camera, and microphone), and fully virtual robots (e.g., voice-based chat bots) have already nearly zero incremental costs (Wirtz et al. 2018).

In summary, the frameworks discussed in this chapter offer strategic lenses through which new services can be viewed. In particular, similar to the shift that started in the industrial revolution from craftsmen to mass production, an accelerated shift in the service sector towards modular, SST, robotics, AI and focused service factory-based business models is likely to occur. As in manufacturing, the craftsman-equivalent will continue to offer a viable business model, but at a high price point. The mass market for many services is likely to shift to operations management approaches and focused service factory strategies with a rapidly increasing deployment of service robots and AI (Wirtz and Zeithaml 2018; Wirtz et al. 2018).

Further Research

Because there is little research on CESE, this chapter is based/builds on Wirtz and Zeithaml's (2018) article and aims to be a next step in the development of a robust body of knowledge. There is a wealth of further research opportunities linked to studying a broader set of service organizations that achieved CESE. A stronger cross-fertilization and integration of the literature on customer satisfaction, service quality, and service excellence, the management literature on organizational ambidexterity, and the operations management literature on service productivity are needed. Table 1 highlights a number of suggestions for further research on the questions surrounding the simultaneous pursuit of service excellence and productivity.

In summary, this chapter aims to help academics and practitioners alike to better understand the potential approaches to a CESE strategy and to encourage more research in this area. A large number of references are provided to assist those who wish to engage in further

reading.

Table 1: Research Questions Related to the Integration of Service Excellence and Productivity

Future research topics	Research questions
Financial outperformance of CESE strategies	• Organizations that successfully achieve a dual strategy reap the highest long-term financial return compared to organizations that focus on either customer satisfaction or productivity alone (Mittal et al. 2005). However, those that pursue but not achieve CESE underperform, and it is not clear what explains this underperformance. One hypothesis is that achieving CESE is more difficult than a strategy focusing on either customer satisfaction or productivity and that therefore more organizations fail to achieve their goals.
The satisfaction-productivity tradeoff	• It would be interesting to measure the presence of the three root causes of the satisfaction-productivity tradeoff across service organizations and link them to organizational performance. That is, do firms that handle these root causes well also perform better in terms of customer satisfaction, productivity and financial performance? • There is little research that explores under what conditions customer satisfaction and productivity conflict, are positively aligned, or are independent of each other. A better understanding is needed what determines the relationship between these two variables.
Additional pathways to CESE	• It would be interesting to explore whether there are other pathways in addition to the three identified by Wirtz and Zeithaml (2018) to CESE. For example, would a stronger innovation culture and a resulting deeper adoption of technology (e.g., robotics and AI) compared to industry also allow the successful pursuit of a CESE strategy?
Drivers and barriers of CESE implementation	• Wirtz and Zeithaml (2018) explored organizations that successfully implemented a CESE strategy. However, it would also be of interest to examine organizations that pursued but did not succeed in achieving CESE. This would help to identify the potential drivers and barriers of CESE success and the interplay of the three CESE strategies.
Implementing a CESE strategy	• Current research explored successful organizations that pursued a CESE strategy but remains silent of how an organization can embark on a journey towards CESE. Research is needed to explore how the knowledge of change management in general (Kotter 1995) and driving rapid service improvements in particular (Wirtz and Kaufman 2016a, 2016b) can be applied to CESE
CESE culture and organizational ambidexterity	• The ambidexterity literature has examined the pursuit of conflicting organizational goals along a number of variables but cost-effectiveness versus service excellence has not been studied yet. It seems worthwhile examining these goals in the context of the

Future research topics	Research questions
	ambidexterity literature, including its measurement and antecedents. • Further research seems warranted to explore whether the relative importance of leadership, contextual and structural ambidexterity is a function of the service organization-specific root causes of the customer satisfaction-productivity tradeoff. • Research is needed to better understand how the different types of ambidexterity can be successfully infused into an organization's culture and climate. For example, how can supportive contexts for ambidexterity emerge, and focus and energize the organization on CESE? How important are reward and recognition systems, and leaders' role modelling of the desired ambidextrous behaviors? Is leadership ambidexterity a necessary but not sufficient condition for achieving contextual and structural ambidexterity in service organizations with their cross-functional integration needs? How can individual employees be enabled and encouraged to exercise their judgment in successfully dealing with conflicting demands?
Leadership, contextual and structural ambidexterity	• Empirical research is needed to confirm the observation by Wirtz and Zeithaml (2018) that all departments including those with an exploration focus had a service excellence and a productivity focus at the same time, and whether this observation is driven by the nature of services and the related root causes of the service excellence-productivity tradeoff. • Empirical research is needed to validate Wirtz and Zeithaml's (2018) case observation that dual culture organizations distinguish between the customer-facing front office and the back office, and that the cost- and service excellence-foci differ only in degree and not in substance. One can hypothesize that the closer a unit is to customers, the stronger the focus will be on service excellence. • The observation that employees need a credible "rallying cry" to be willing to subscribe to a dual culture strategy and that is, cost-consciousness needs to be "sold" to employees to gain their buy-in (Wirtz and Zeithaml 2018) warrants empirical testing. Future research is needed to explore when, why and how employees buy into a CESE strategy.
Components of operations management approaches	• Empirical research is needed to explore whether the three operations management approaches are mostly used together and build on one another, or whether they can also be used in isolation and/or with differing levels of intensity. For example, people processing services may require a much tighter approach to reducing process variability than information processing services. Here, robotics and AI may potentially offer new ways to use these operations management approaches. Unlike front line employees who would have to be trained for many different types of services, such training is fully scalable for AI (Wirtz et al. 2018).

Future research topics	Research questions
Relative advantage of a focused service factory	• The potential outperformance of the focused service factory seems to be higher for people and physical possession processing services such as hospitals, restaurants and car repair workshops as it is more expensive to deal with customer-induced variability in these contexts. Here, distributed capabilities and facilities limit productivity potential and the focused service factory seems to be able to offer much more significant cost-savings and quality advantages over a service operation with a wider scope. In contrast, information processing services may offer more possibilities to deal with customer-induced uncertainty as AI will increasingly be able to deal with such issues. For example, a call center 'manned' by voice-based chat bots will be able to deal with a much wider range of questions and transactions compared to a call center manned by people (Wirtz et al. 2018). Further research is needed to understand better which of the CESE strategies suit best for certain service characteristics.

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