Understanding the Impact of Relationship Disruptions

Christian Schmitz
Professor of Sales Management and Chair of the Sales Management Department
University of Bochum
Sales Management Department
Universitaetsstraße 150
44780 Bochum, Germany
Phone: +49-234-32-26596
E-mail: schmitz.christian@rub.de

Maximilian Friess
Postdoctoral Research Fellow
University of Bochum
Sales Management Department
Universitaetsstraße 150
44780 Bochum, Germany
Phone: +49-234-32-21467
E-mail: maximilian.friess@rub.de

Sascha Alavi
Professor of Sales Management and Chair of the Sales Management Department
University of Bochum
Sales Management Department
Universitaetsstraße 150
44780 Bochum, Germany
Phone: +49-234-32-26596
E-mail: sascha.alavi@rub.de

Johannes Habel
Associate Professor
Warwick Business School
The University of Warwick
Scarman Rd, Coventry CV4 7AL
United Kingdom
Phone: +44-24-765-28674
E-mail: johannes.habel@wbs.ac.uk

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ABSTRACT

Personal relationships between salespeople and customers are essential for the success of business-to-business (B2B) relationships and research has shown that a change of the salesperson can severely harm financial performance. Yet such interpersonal relationship disruptions also may have positive effects, by encouraging vitalizing reexplorations of the relationship. Using multilevel loyalty theory and relationship lifecycle theory, the authors offer a comprehensive conceptualization of potentially countervailing consequences of relationship disruptions. In particular, disruptions may have different effects on resale revenue (from previously sold products) versus new sale revenue (from newly sold products), contingent on both the history and expected future development of the relationship. Therefore, this study examines moderators on the firm-level relationship prior to disruption and salesperson relationship management afterward. Longitudinal data from 2,040 customers of an international business-to-business firm reveal that a disruption can increase overall performance by more than 29%, depending on the firm-level relationship before disruption and the new salesperson's relationship management. Managers can use these findings proactively to evaluate and manage the risks and opportunities involved in relationship disruptions.

Keywords: relationship disruption; relationship marketing; salesperson replacement; business-to-business marketing; sales management

Statement of intended contribution

Relationship disruptions due to a change in the salesperson are prevalent in real-world business-to-business (B2B) settings, and extant research suggests their harmful effects on financial performance. As an extension of prior research, this study explores both harmful and potentially beneficial outcomes of disruptions. Using preliminary insights from practitioners, multilevel loyalty theory, and relationship lifecycle theory, we propose a model that disentangles the effects of a relationship disruption on resale revenue (earned from previously sold products) and new sale revenue (earned from newly sold products). With this theoretical basis, we derive a contingency framework to understand how relationship disruptions affect financial performance. A quasi-experimental field study design with 2,040 B2B customers shows that a relationship disruption harms resale revenue but benefits new sale revenue. More importantly, a relationship disruption can help overall financial performance if the firm-level relationship was strong, because the customer received value prior to disruption, as well as if prior firm-level relationship dynamics leave potential for value creation and if the new salesperson's relationship management focuses on value creating activities.

Our study thus advances the academic marketing discipline by developing and empirically validating a model that features both positive and negative effects of interpersonal relationship disruptions, along with relationship contingency factors. The novel facets of this model include it's explicit theorizing, modeling, and empirical testing of a positive effect of relationship disruptions, as well as the detailed analysis of relationship contingency factors that reflect the context of the relationship being disrupted, including firm-level relationship strength and dynamics and the new salesperson's relationship management.

Customer relationships are among a company's most valuable assets, accounting for up to 20% of a firm's overall financial value (Binder and Hanssens 2015). Accordingly, U.S. companies spend more than $12 billion annually to manage customer relationships and increase customer retention in business-to-business (B2B) settings (Avery, Fournier, and Wittenbraker 2014; Zhang et al. 2016); improving retention rates by 5% can raise profits by 25%–95% (Gallo 2014). The interpersonal relationship between a supplier's salesperson and the buying customer representative in particular is critical to establishing beneficial, long-term B2B exchanges (Gupta et al. 2019; Hartmann, Wieland, and Vargo 2018). Therefore, scholars suggest that preserving interpersonal relationships is key to ensure the growth of B2B firms (e.g., Ahearne, Bhattacharya, and Gruen 2005; Palmatier, Scheer, and Steenkamp 2007).

However, such interpersonal relationships easily can be disrupted (Shi et al. 2017; Boichuk et al. 2019; Panagopoulos, Mullins, and Avramidis 2018), whether by managerial fiat (e.g., restructuring sales organizations, account strategies, territory alignments) or through individual decisions (e.g., career path, retirement, turnover). A relationship disruption[1] refers to a change of salesperson in the relationship with the customer, that is, from one salesperson to another employed by the selling firm. Data suggest that 76% of U.S. consumer goods sales organizations have undergone restructurings in the past three years (Allen, Ebrahim, and Kelly 2013), and researchers estimate that salesperson turnover rates reach 20%–30% annually (Boles et al. 2012; Darmon 2008). According to *Forbes*, today's salespeople leave faster than ever, and 51% of them seek new jobs at other organizations (Comaford 2016).

Because relationship disruptions are so ubiquitous (Boles et al. 2012) and deeply impactful, they have relevant implications for B2B firms' performance (Bendapudi and Leone 2002; Darmon 2008). In particular, relationship disruptions may create a loss of customer

knowledge, diminish interpersonal trust, and increase uncertainty (Bendapudi and Leone 2002), and accordingly, extant marketing research and practice tends theoretically to assume their negative effects (Palmatier 2008; Table 1). Shi et al. (2017) provide first empirical evidence that relationship disruptions lead to losses of up to 17.6% of total customer revenue, and McKinsey & Company (2010) identify protecting disrupted customer relationships and their revenues as a top-three management priority after major organizational restructurings.

Insert Table 1 about here

Yet, we posit that relationship disruptions also have positive effects. First, after a disruption, a new incoming salesperson and the customer become newly acquainted and can reexplore mutual opportunities for value creation (e.g., Tuli, Kohli, and Bharadwaj 2007). In this scenario, a relationship disruption may improve the accuracy of customer need identification, because an incoming salesperson is less likely to exhibit complacency and more likely to ask unbiased questions (Anderson and Jap 2005; Grayson and Ambler 1999; Lund, Kozlenkova, and Palmatier 2015). The resulting offerings may better fit customer needs and increase the probability of sales. Second, a relationship disruption might create an opportunity for customers to learn about other available products. By interacting with a new salesperson, with different sales experience, industry knowledge, and product focus, the customer might learn about other products, which may increase cross-buying. Third, a new salesperson needs to devote enhanced effort to obtain in-depth customer knowledge and build customers' trust after a disruption. This enhanced may elevate customers' perception of the value of the relationship (Habel et al. 2019; Ulaga and Eggert 2006) and motivate them to expand the relationship.

These potential positive and negative effects of a relationship disruption do not exist in a vacuum but instead should be contingent on the prior relationship between the selling firm and

the customer, as well as the salesperson's relationship management after the disruption. For example, if a customer has a strong business relationship with the selling firm, a relationship disruption at the interpersonal level may not infringe as much on the overall business relationship. In some relationship contexts, changing the salesperson could initiate a reexploration and revitalization of the relationship, such that the positive effects may outweigh the negative effects. In a preliminary survey of 273 U.S. B2B purchasing managers, we gained initial support for this premise: Among those who expected any impact of a disruption, only 22% predicted that future revenues would decline, whereas 78% of the managers anticipated future relationship revenue growth, and 31% indicated that they had proactively prompted relationship disruptions in the past, to revitalize B2B relationships (see Web Appendix W1 for details). In response to this practical need and the scarcity of existing research, we (1) explore the potential positive effects of relationship disruptions and (2) propose a comprehensive, contingency framework to understand when and how relationship disruptions (negatively or positively) affect the future performance of a customer relationship.

(1) Positive effect of relationship disruptions: To the best of our knowledge, no prior research has conceptualized or hypothesized positive performance effects of an interpersonal relationship disruption, nor empirically investigated such effects yet. Some authors suggest negative effects of long-term interpersonal relationships (e.g., Anderson and Jap 2005; Grayson and Ambler 1999; Lund, Kozlenkova, and Palmatier 2015), but few studies specifically raise (and none empirically tests) the possibility of beneficial effects of disruptions (Darmon 2008; Jap and Anderson 2007; Shi et al. 2017). We propose that a relationship disruption may allow firms to seize new, uncovered business opportunities, with benefits for the relationship's financial performance. We integrate multilevel loyalty theory (MLT, Palmatier, Scheer, and Steenkamp

2007) with relationship lifecycle theory (RLT, Dwyer, Schurr, and Oh 1987) to theorize these performance effects, differentiated into a loyalty and relationship development path. On the loyalty path, the loss of a salesperson as a contact leads to losses in revenue earned from previously sold products (hereafter, *resale revenue*). The relationship development path instead emphasizes the development of a new relationship with the incoming salesperson and the resulting gains in revenue earned from newly sold products (hereafter, *new sale revenue*). Data pertaining to 2,040 B2B customers of a leading European logistics company over a four-year period, implemented in a series of difference-in-differences models, reveal that relationship disruptions can *decrease* resale revenue by 28.1% but can also *increase* new sale revenues by 50.6%. These novel findings indicate that a disruption can simultaneously harm *and* benefit total revenue, through two opposing paths.

(2) Contingent effects of relationship disruptions: We posit that a relationship's future development is fundamentally contingent on the relationship prior to the disruption and how it is managed afterward. Our conceptual framework, based on MLT and RLT, seeks to explain the extent to which customers are motivated to maintain (resale revenue) and expand (new sale revenue) the relationship with the selling firm after a disruption. This motivation stems from customers' evaluations of the past value they have received from the relationship, their anticipation of future value creation potential, and value-creating activities by the selling firm after the disruption (Jap and Anderson 2007; Palmatier, Scheer, and Steenkamp 2007; Sirdeshmukh, Singh, and Sabol 2002; Zhang et al. 2016). Accordingly, we consider three categories of moderators: firm-level relationship *strength* and *dynamics* prior to disruption (in particular the value received in the past and potential for value creation; Palmatier et al. 2006, 2013) and the incoming salesperson's *relationship management* after the disruption (value-

creating activities; Palmatier et al. 2008). Our empirical analysis indicates that in favorable conditions, a relationship disruption can increase total revenue with a customer. For example, when the firm-level relationship was strong and prior dynamics suggest value creation potential and minimal risks for value losses, a disruption leads to substantially lower losses in resale revenue and higher gains in new sale revenue, leading to total revenue increases of 10.7%–22.6%. In these circumstances, effective relationship management activities by the incoming salesperson even can increase total revenue by 28.9%–41.1%. These findings offer meaningful, actionable managerial recommendations for coping with relationship disruptions, which we discuss and summarize in a decision framework in the managerial implications section.

PRELIMINARY STUDY

Most prior research assumes the negative performance effect of relationship disruptions, so to establish an initial sense of their potential positive effects and contingencies, we conducted semi-structured, qualitative interviews with 11 experienced managers from different industries (see the Appendix). The preliminary study explores likely contexts or reasons for beneficial effects, as well as how experienced practitioners evaluate disruptions. The questionnaire covers three main topics. We asked interviewees to explain their understanding of an interpersonal relationship and its importance to their business, whether relationships should be protected or can be disrupted, and their predictions of the effects of relationship disruptions. The semi-structured interviews offer deep insights, through follow-up queries, additional responses, and practical examples.

The practitioners perceive ambivalent effects of relationship disruptions, as succinctly summarized by SM5: “When a relationship experiences radical change, there are always opportunities and risks. Risks of losing things, and opportunities to freshly look upon the customer and recognize new potentials.” As PM2 confirms, “Usually I was able to learn something from a changing salesperson. He conveyed knowledge to me that I hadn’t had before.

That can be an opportunity. But such a change can also backfire. For example, if my contact person changes and I now have someone in front of me who is not as deeply involved in the matter as I am." These practitioners also note several contingencies that may determine the extent to which the opportunities and risks materialize. A quote from the sales director of the firm with which we cooperated for the main study exemplifies this insight:

> When the customer values our relationship and our mutual business history, assigning a new sales rep will not throw him off the track. Quite the opposite, I think that especially then, our sales reps may get the chance of freshly looking upon our settled old-timer relationships and give them a fresh start.… Yes, I truly see benefits.

We elaborate on these contingencies in subsequent sections, thereby blending the results of our preliminary study with our theoretical framework and hypotheses.

OVERVIEW OF THE CONCEPTUAL MODEL

From a customer perspective, relationship disruptions inherently comprise two facets: the loss of the customer's key contact with the selling firm and the initiation of a new interpersonal relationship with an incoming salesperson. We argue that these two facets evoke distinct effects of a relationship disruption on the firm's resale revenue (earned from previously sold products to customer) and new sale revenues (earned from newly sold products to customer) with a customer. The effects of the exit of a salesperson may be explained best by multilevel loyalty theory (Palmatier et al. 2007; Palmatier, Scheer, and Steenkamp 2007); the potential initiation of a new relationship with the incoming salesperson may be explained best by relationship lifecycle theory (Dwyer, Schurr, and Oh 1987; Zhang et al. 2016). Therefore, we situate our research in accordance with both MLT and RLT and posit that two distinct paths explain how relationship disruptions differentially influence *resale revenue* and *new sale revenue*. By combining both theories, we derive three contingency categories for both paths, which account for relevant determinants of customers' value perceptions, to predict their motivation to maintain or expand a

relationship after disruption (see Theoretical Rationale for a Contingency Perspective). Figure 1 depicts our framework and hypotheses.

Insert Figure 1 about here

INTEGRATING MULTI-LEVEL LOYALTY AND RELATIONSHIP LIFECYCLE THEORY AS THEORETICAL FRAMEWORK

Negative Main Effect on Resale Revenue: The Loyalty Path

Multilevel loyalty theory (MLT) differentiates salesperson-owned and firm-owned loyalty; it has been tested and applied in many studies (e.g., Palmatier, Scheer, and Steenkamp 2007; Sirdeshmukh, Singh, and Sabol 2002; Yim, Tse, and Chan 2008). This theory posits that customers' loyalty might accrue to the salesperson and to the selling firm (Palmatier et al. 2007). Through successful interactions and exchanges, the customer grows to trust an individual salesperson (Doney and Cannon 1997; Macintosh and Lockshin 1997), increasing loyalty to that person. Because a salesperson often represents a selling firm's "face to the customer", loyalty to the salesperson constitutes a key driver of a B2B relationship's financial performance (Beatty et al. 1996). Through successful transactions, the customer also might develop trust in the selling firm, its capabilities, and its products, increasing loyalty to that firm and the probability of future, repeated purchases (Fang et al. 2008; Palmatier, Scheer, and Steenkamp 2007).

An interpersonal relationship disruption may cause salesperson-owned loyalty and its beneficial effects to disappear (Bendapudi and Leone 2002; Shi et al. 2017), thereby hamper customer's loyalty to the selling firm (Palmatier, Scheer, and Steenkamp 2007) and reduce resale revenues (Beatty et al. 1996; Berry 1995). We label this mechanism the *loyalty path*.

Companies such as AT&T and Merck have deliberately cut sales jobs recently (Beasley 2017; Patel 2019), which means severing personal connections and related interpersonal benefits between customers and affected salespeople. Such experiences can be frustrating for customers,

as PM2 put it in our preliminary study: "It's always sad if the know-how that you expect from a salesperson suddenly vanishes and I have to explain to the salesperson again what was agreed upon." According to MLT, this loss should weaken customers' loyalty to the selling firm, on average (Palmatier, Scheer, and Steenkamp 2007), which might induce them to reconsider their repeat purchases (Palmatier et al. 2006; Reinartz and Kumar 2003), with potentially detrimental results for resale revenue. We hypothesize:

> H_1: An interpersonal relationship disruption decreases a selling firm's resale revenue with a customer.

Positive Main Effect on New Sale Revenue: The Relationship Development Path

Relationship lifecycle theory (RLT), explains how relationships develop along distinctive relationship stages (Dwyer, Schurr, and Oh 1987; Jap and Anderson 2007; Ring and Van de Ven 1994). If relational actors explore and fortify mutual communication and interaction options, and receive sufficient value from the relationship, they likely enter advanced, productive relationship stages, characterized by high mutual commitment, investments, and dependence (Dwyer, Schurr, and Oh 1987). For relationship formation, RLT puts particular emphasis on the *exploration* stage, when the salesperson and customer get acquainted, identify the customer's needs, and explore value creation potential (Dwyer, Schurr, and Oh 1987); it constitutes a key precondition for developing and maintaining relationships (Dwyer, Schurr, and Oh 1987; Zhang et al. 2016).

After a relationship disruption, the new, incoming salesperson likely tries to initiate a new interpersonal relationship with the customer.[2] Both partners become acquainted, exchange new information, and form expectations about how to interact in the future (Dwyer, Schurr, and Oh 1987; Jap and Anderson 2007). According to RLT, this likely involves a joint need exploration phase (Dwyer, Schurr, and Oh 1987; Palmatier et al. 2013), marked by mutual scanning and learning (Jap and Ganesan 2000; Selnes and Sallis 2003; Zhang et al. 2016) which

can foster the generation of new sale revenue through cross-selling (Schmitz, Lee, and Lilien 2014). As a practitioner in our preliminary study acknowledges, after a disruption, "you go through another phase of learning, testing and trial, to prove the customer that he or she can rely on you" (SM4). We label this mechanism the *relationship development path*.

While a disruption also might encourage the salesperson to offer substitute products for known customer needs[3], our reasoning of truly new need identification is in line with evidence from our interviews, as PM1 asserts, "If we haven't found a solution for a problem while collaborating with the previous salesperson, a new salesperson may provide an opportunity. Maybe he knows the problem from another company and has experience that we can use to solve the problem." Thus, we hypothesize:

> H_2: An interpersonal relationship disruption increases a selling firm's new sale revenue with a customer.

CONTINGENT POSITIVE AND NEGATIVE EFFECTS OF RELATIONSHIP DISRUPTIONS

Theoretical Rationale for a Contingency Perspective

The effects of relationship disruptions on revenue depend on customers' motivation to maintain or expand the relationship. If customers are highly motivated to maintain the relationship with a selling firm, it may compensate for the loss of a salesperson and thereby safeguard resale revenues. Regarding new sale revenue, an incoming salesperson can effectively identify new needs for customers only if the customers are motivated to reexplore and expand the relationship and cooperate in the newly initiated exploration process (Zhang et al. 2016).

Both MLT and RLT posit that customers' motivation to maintain or expand a relationship depends on their overall value perception of that relationship (Dwyer, Schurr, and Oh 1987; Palmatier, Scheer, and Steenkamp 2007). This value perception reflects their evaluations of past value received from the relationship, anticipation of future value creation potential, and

experience of value-creating activities by the selling firm (Jap and Anderson 2007; Palmatier, Scheer, and Steenkamp 2007; Sirdeshmukh, Singh, and Sabol 2002; Zhang et al. 2016). Accordingly, we include (1) the strength, and (2) dynamics of the firm-level relationship before disruption, and (3) salespeople's relationship management after disruption as moderators in the contingency framework. We provide an illustrative overview on our contingency reasoning in Web Appendix W2.

First, the *strength* of the firm-level relationship prior to disruption indicates a customer's bonds to the selling firm, primarily established because the relationship created value for the customer in the past (Palmatier et al. 2006; Wilson 1995). If strong enough, these bonds may lead the customer to find ways to overcome negative effects of disrupted interpersonal ties (Hibbard, Kumar, and Stern 2001) and foster relationship expansion. Second, recent *dynamics* in the firm-level relationship may signal potentials for value creation after disruption (Palmatier et al. 2013). If highly routinized buying in the past limits need identification processes (Grewal et al. 2015), a disruption may reveal greater potential for future value creation. Third, *relationship management* efforts by the new salesperson shape the customer's perception of value-creating activities after disruption (Palmatier et al. 2008). Increased *personal* communication might quickly build trust in the new salesperson (Zhang et al. 2016). In the following, we hypothesize on all three classes of moderators in our conceptual model (Figure 1).

Firm-Level Relationship Strength

Interactive effects of firm-level relationship strength on new sale revenue. The strength of the interfirm relationship, as reflected by customers' perceptions of value and commitment to the relationship, is a core characteristic of B2B customer relationships (De Wulf, Odekerken-Schröder, and Iacobucci 2001; Palmatier et al. 2006; Zhang et al. 2016). Customers may perceive an interfirm relationship as particularly strong if they receive benefits from the selling firm, such

as financial incentives or customized solutions that provide functional value (De Wulf, Odekerken-Schröder, and Iacobucci 2001; Reynolds and Beatty 1999). That is, for B2B customers, beneficial prices constitute a major part of the value they receive (Almquist, Cleghorn, and Sherer 2018), but as a CEO interviewed for the IBM Global CEO Survey (2010) puts it, they also "want personalization of services and products. It is all about the market of one." Both financial and functional benefits thus might motivate customers to reexplore and expand the relationship with the selling firm, along the relationship development path (De Wulf, Odekerken-Schröder, and Iacobucci 2001; Dwyer, Schurr, and Oh 1987; Jap and Anderson 2007; Palmatier, Scheer, and Steenkamp 2007). A positive evaluation of value received identifies the relationship as attractive and worthwhile (Dwyer, Schurr, and Oh 1987) and fosters expectations of future benefits and value creation (Harmeling et al. 2015; Wieseke, Alavi, and Habel 2014).

The effectiveness of the need exploration process in turn may depend fundamentally on the customer's motivation to expand and reexplore value creation potential. If customers are highly motivated to explore value creation potential, they likely cooperate with the incoming salesperson in the need exploration process and exchange substantial new or hidden information (Dwyer, Schurr, and Oh 1987; Zhang et al. 2016). This joint need exploration process effectively can uncover novel customer needs and facilitate cross-selling (Schmitz, Lee, and Lilien 2014).

> H_{3a}: The positive effect of an interpersonal relationship disruption on new sale revenue is stronger if prior financial benefits are high and weaker if prior financial benefits are low.
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> H_{3b}: The positive effect of an interpersonal relationship disruption on new sale revenue is stronger if prior functional benefits are high and weaker if prior functional benefits are low.

Interactive effects of firm-level relationship strength on resale revenue. We have argued that the loss of the leaving salesperson may undermine customers' loyalty to the selling firm and reduce resale revenue (H_1), on the loyalty path. However firm-level relationship strength can

buffer the negative effects of disruptive relationship events (Hibbard, Kumar, and Stern 2001). If customers receive substantial benefits from the selling firm prior to disruption, whether financial or functional, they should be more motivated to maintain the firm relationship, despite the change of salespeople, so their resale purchases would be less likely to decrease. Our reasoning is supported by MLT and our preliminary study, in which SM8 predicts, "If you supply top products and customers are satisfied, then the interpersonal relationship plays only a minor role," and PM1 confirms, "Of course you may be dependent on the supplier.... Then you have to patch things up, even if the chemistry is not right." Thus:

> H_{4a}: The negative effect of an interpersonal relationship disruption on resale revenue is weaker if prior financial benefits are high and stronger if prior financial benefits are low.
>
> H_{4b}: The negative effect of an interpersonal relationship disruption on resale revenue is weaker if prior functional benefits are high and stronger if prior functional benefits are low.

Relationship strength also might result from another common, firm-level connection, namely, contractual bonds. These bonds do not pertain to customer benefits directly but instead reflect contractual obligations (Carson and Gosh 2019; Jap and Ganesan 2000; Samaha, Palmatier, and Dant 2011), so they offer another potential moderator. Contractual obligations likely increase customers' motivation to maintain the B2B relationship after a disruption, because deviating from those obligations would be costly (Jap and Ganesan 2000). Prematurely ending contracts can incur contractual penalties, switching costs, and transaction costs to form contracts with new vendors (Lusch and Brown 1996). To avoid them, customers might hesitate to change their resale purchases, even after disruption. In our preliminary interviews, SM5 elaborates on contracts that fix firm-level relationships for a period of three years, which "objectif[y] relationships and make[] them less dependent on interpersonal aspects." Thus:

> H_{4c}: The negative effect of an interpersonal relationship disruption on resale revenue is weaker if prior contractual bonds are high and stronger if prior contractual bonds are low.

We do not predict that contractual bonds influence the relationship development path. According to RLT, a customer's motivation to expand a relationship depends on expectations of future benefits. The presence of contractual bonds entails switching costs, reinforcing the loyalty path, but does not necessarily entail future benefits (Jap and Ganesan 2000).

Firm-Level Relationship Dynamics

Interactive effects of firm-level relationship dynamics on new sale revenue. Relationship dynamics are no less important than relationship strength for understanding financial performance (Palmatier et al. 2013). The developmental trajectory reflected in these variables contains information about future trends, business potential, and risks (Harmeling et al. 2015; Palmatier et al. 2013), beyond the mean level of prior relationship strength. In this sense, RLT and MLT converge on the idea that prior relationship dynamics determine future relationship developments (Jap and Anderson 2007; Palmatier, Scheer, and Steenkamp 2007). For example, relationship dynamics prior to a disruption should shape customer expectations about the prospective future value of the relationship and influence motivations to maintain or expand it (Dwyer, Schurr, and Oh 1987; Harmeling et al. 2015; Palmatier et al. 2013). In accordance with purchasing research (Anderson, Chu, and Weitz 1987; McQuiston 1989), we account for what customers recently purchased (the *purchase object*), by including product line growth (Reinartz and Kumar 2003) and complex growth (McQuiston 1989), and we account for how customers recently purchased (Johnston and Lewin 1996) (the *purchase process*), by including variability of the purchase process (Anderson, Chu, and Weitz 1987; Grewal et al. 2015).

Regarding dynamics related to the *purchase object*, a relationship can develop if the customer purchases more complex products from a selling firm as opposed to rather simple products (Ulaga and Reinartz 2011). Purchasing complex products requires close coordination between the customer and the selling firm and a proficient need identification process

(Macdonald, Kleinaltenkamp, and Wilson 2016; Tuli, Kohli, and Bharadwaj 2007; Webster and Wind 1972). According to a McKinsey report, "high-value transactions are becoming increasingly complex, often including risk-sharing and service-level agreements as customers ask vendors to 'put more skin in the game' to ensure that they stay committed to providing real value" (Davie, Stephenson, and De Uster 2010). When such complex business purchases increase rapidly, prior to a relationship disruption, the customer and selling firm likely have engaged in close exchanges to explore the customer's needs and thus exploited the customer's business potential. This customer is unlikely to be motivated to reexplore value creation potential further or purchase new products (Jap and Ganesan 2000; Zhang et al. 2016). Thus, for the incoming salesperson, identifying novel, unaddressed needs may be more difficult, and the potential to cross-sell new products is limited. Conversely, if complex purchases have not grown notably prior to the disruption, customer needs might not have been explored recently (Jap and Ganesan 2000; Zhang et al. 2016), so the incoming salesperson has more opportunity to uncover unmet customer needs, with implications for the customer's motives to expand the relationship. In our preliminary study, SM4 explains, "Opportunities arise particularly if customers' potential is untapped. You may then improve results when exchanging the colleague."

> H_{5a}: The positive effect of an interpersonal relationship disruption on new sale revenue is stronger if recent growth in complex purchases is low and weaker if recent growth in complex purchases is high.

In addition, a relationship progresses if the customer buys from more distinct product lines. This reasoning is similar to our previous argument: If customers expand their relationship with the selling firm prior to disruption by purchasing a more distinct product lines, their needs likely have been explored recently (Schmitz, Lee, and Lilien 2014; Zhang et al. 2016), so they have little motivation to reexplore and expand the relationship. As SM2 notes, "It could be that

the customer does not purchase more because he's finished building up this business."

> H_{5b}: The positive effect of an interpersonal relationship disruption on new sale revenue is stronger if recent growth in the number of purchased product lines is low and weaker if recent growth in the number of purchased product lines is high.

Regarding dynamics in the *purchase process*, purchasing might be highly variable or strongly routinized (Webster and Wind 1972). Routinized processes involve standardized buying procedures, with little effort or deliberation (Johnston and Lewin 1996). The likelihood of continuous joint need exploration or up-to-date need identification before the relationship disruption thus seems low. As SM3 puts it, "It frequently happens that salespeople 'fall asleep' in a relationship and no longer expend effort." But if the customer's purchasing has been strongly variable, the responsible salesperson likely has engaged more and extensively explored value creation potentials with the customer. Therefore, after disruption, the new incoming salesperson may be less likely to uncover new needs or generate additional new sale revenue with this customer (Dwyer, Schurr, and Oh 1987; Jap and Ganesan 2000).

> H_{5c}: The positive effect of an interpersonal relationship disruption on new sale revenue is stronger if the recent variability of the purchase process is low and weaker if the recent variability of the purchase process is high.

Interactive effects of firm-level relationship dynamics on resale revenue. Regarding dynamics related to the *purchase object*, prior sales research establishes that salespeople take on increasingly important roles at higher levels of complexity (Tuli, Kohli, and Bharadwaj 2007; Ulaga and Kohli 2018; Ulaga and Reinartz 2011). For example, in complex solution selling contexts, salespeople must be involved to deploy offerings effectively for customers (Lawrence et al. 2019; Panagopoulos, Rapp, and Ogilvie 2017). If complex sales have grown prior to disruption, the customer–salesperson bond likely has grown stronger too. When this strong bond is disrupted, customers may feel neglected, by the salesperson or selling firm, and experience a

sense of disappointment or lost trust (Harmeling et al. 2015). According to SM2, "When replacing a sales rep, I take away the entire history. Whatever we invested into the relationship, we have to prove to the customer once again." Thus, customers should be considerably less motivated to maintain the relationship with the firm after disruption in this case.

> H_{6a}: The negative effect of an interpersonal relationship disruption on resale revenue is weaker if recent growth in complex purchases is low and stronger if recent growth in complex purchases is high.

Growth in the number of different purchased product lines does not necessarily hinge on interpersonal ties and individual salespeople's involvement though. Rather, this measure might imply increasing commitment or dependence of the customer on the selling firm (Reinartz and Kumar 2003). The breadth of the purchased product portfolio often serves as an important indicator of customers' motivation to maintain a business relationship (Kamakura et al. 2003; Kumar, George, and Pancras 2008; Reinartz and Kumar 2003). Consequently, we expect that a growing number of purchased product lines prior to the disruption buffers the negative effect of a relationship disruption on resale revenue with the selling firm.

> H_{6b}: The negative effect of an interpersonal relationship disruption on resale revenue is weaker if recent growth in the number of purchased product lines is high and stronger if recent growth in the number of purchased product lines is low.

Finally, regarding dynamics in the *purchase process*, we argue that the variability of the purchase process prior to a disruption buffers the negative effect of a relationship disruption on resale revenue. High purchase process variability implies that the relationship is dynamic and changes frequently, so customers may be accustomed to devote substantial efforts to interact, coordinate, and negotiate with the firm. They also may be used to changes in the relationship, so they can cope more readily with a relationship disruption (Harmeling et al. 2015). Conversely, if the selling process is strongly routinized, customers may cherish and expect continuity in the

sales procedures, and a relationship disruption that severely disconfirms these expectations may induce customers to search for alternative suppliers, reducing their resale revenue.

> H_{6c}: The negative effect of an interpersonal relationship disruption on resale revenue is weaker if recent variability in the purchase process is high and stronger if recent variability in the purchase process is low.

New Salesperson Relationship Management

Both MLT and RLT contend that relationship development and customers' motivation to maintain or expand a relationship depend on individual salesperson activities (Dwyer, Schurr, and Oh 1987; Jap and Anderson 2007; Palmatier, Scheer, and Steenkamp 2007). Extant research emphasizes a key role of personal communication in particular (Zhang et al. 2016). Thus, we posit that the incoming salesperson's personal communication intensity—that is, the extent to which he or she personally communicates with a customer—affects customers' motivation to maintain the relationship and retain resale revenue (loyalty path). Salespeople also can motivate customers to expand and reexplore the relationship by offering them a broader range of products (Zhang et al. 2016) and tap new sources of value (Schmitz, Lee, and Lilien 2014). Accordingly, the incoming salesperson's cross-selling intensity, defined as the propensity to offer a broader product portfolio, may affect the generation of new sale revenue after disruption.

Interactive effects of salesperson's cross-selling intensity on new sale revenue. Salespeople vary the breadth of the product portfolio they offer, in their efforts to cross-sell and expand the relationship (Schmitz 2013). Some salespeople focus on specific products; others adopt a more general approach and offer a wider product range. We argue that a wider product range makes the positive effect of relationship disruption on new sale revenue more pronounced. If the incoming salesperson engages in greater cross-selling intensity than the leaving salesperson, it implies a greater capacity to offer and effectively tailor new products to customers' needs. For customers, this broad portfolio of products that address their needs and

create value offers a key motivation to reexplore and expand the relationship (Zhang et al. 2016), increasing the likelihood of new sale revenue. Our preliminary study corroborates this notion; as SM1 notes: "A new assignment makes sense if there's a lack of capabilities.… If you need special expertise, then you replace the salesperson."

> H_{7a}: The positive effect of an interpersonal relationship disruption on new sale revenue is stronger if the incoming salesperson exhibits greater cross-selling intensity than the leaving salesperson and weaker if the incoming salesperson exhibits lower cross-selling intensity.

Interactive effects of salesperson's personal communication intensity on resale revenue. We have proposed that a relationship disruption may reduce a customer's resale revenue because the leaving salesperson no longer provides a relational tie with the selling firm (H_1). However, if the incoming salesperson pursues relationship maintenance through personal communication, such as personal visits (Ulaga and Eggert 2006), a new personal bond with the customer might result more quickly, increasing customers' motivation to maintain the relationship with the firm. As Kozlenkova et al. (2017, p. 24) note, "Communication builds trust." Thus, incoming salespeople's personal communication intensity may compensate for the loss of the leaving salesperson, buffering the harmful effects of relationship disruptions on resale revenue. As PM2 explains, "A changing salesperson has something positive if this increases personal service…. Today our contact checks in with us regularly. We hadn't heard much from her predecessor."

> H_{7b}: The negative effect of an interpersonal relationship disruption on resale revenue is weaker if the incoming salesperson exhibits greater personal communication intensity than the leaving salesperson and stronger if the incoming salesperson exhibits lower personal communication intensity.

EMPIRICAL STUDY

Research Context

We employ a quasi-experimental design with difference-in-differences (DiD) models to estimate the causal effects of a relationship disruption (Shi et al. 2017). We collected data from a

central European B2B logistics company (public limited company), one of the five largest logistics providers in its country; this company generates approximately $1.45 billion annually in total revenue. It provides a broad portfolio of logistics and warehousing services, ranging from standardized postal products and services (e.g., courier, express, parcel services) to complex transport services (e.g., logistic systems, special transport or warehousing) to customized logistics solutions (e.g., outsourcing of logistics and business processes, e-commerce solutions).[4] Its 5,400 employees serve small (average $36,800 annual total revenue) to large ($1.39 million annual total revenue) B2B customers across six sales regions. Customers come from various industries, such as wholesale and retail trade, manufacturing, transport and logistics, information and communication, finance, insurance, real estate, and technical services. For its field-based sales approach, the firm relies primarily on direct sales and applies a "one face to the customer" philosophy, such that each salesperson is solely responsible for her or his accounts and promotes all product categories offered by the company, with the support of specialists from marketing or logistics. Salespeople all are subject to the same compensation and incentive scheme, with a commission added to a fixed yearly salary (maximum of 25% of the fixed salary). For the variable compensation, 40% can be achieved by generating additional new sale revenues (cross-selling), whereas 60% can be achieved by generating additional resale revenues (up-selling).

To explore the effects of relationship disruptions, we gathered nationwide performance records for B2B customers in all major sales regions from the company. For every customer, we obtained monthly product-level transaction records for 2012–2015, including sales volume, prices, and quantities. The data cover 7,102 B2B customers, 240 product categories, and 48 observation points, which produced a data set of more than 3.46 million transactions. In addition, we gathered key product characteristics (e.g., complexity, degree of customization) from the

company. Then we gathered and matched information on relationship disruptions from the company's customer relationship management system. Before 2016, no structural reorganization or reassignment program that might have prompted systematic relationship disruptions took place; that is, relationship disruptions occurred randomly, generally due to individual salesperson factors (e.g., job rotation, career decisions, relocation) or exogenous reasons (e.g., retirement).

Research Sample

The sample includes customers directly linked to and served by a specific salesperson. We define the *disruption* group by three conditions. First, customers must have experienced a relationship disruption in one of the four quarters of 2014. This timeframe ensures that we have sufficient data before and after the disruption. These four quarters also provide the main reference for sampling the control group and calculating the time frames for the measures. The measures pertain to data prior to or after the respective quarter. We include quarter dummies in a subsequent analysis to control for seasonal heterogeneity (see Model Specification and Results). Second, customers may react differently to repeated relationship disruptions, so we include only customers that experienced exactly *one* disruption during 2012–2015, which ensures comparability among the disruption group. Third, none of the relationship disruptions experienced by the customers resulted from a demotion or promotion of the customer's status.

For the *control* group, we randomly sampled customers that did not experience any relationship disruption. Following Shi et al. (2017), we sampled twice as many treated customers for each relevant quarter (n = 1,360). This stratified random sampling spans each customer class (i.e., categorized by customer total revenue volume, as assigned by the company) and industry, to support a comparable distribution in every quarter.

Measures

We aggregated the longitudinal data into three periods. Period T1 reflects combined data

from 12 months before, and Period T2 is the 12 months after relationship disruption. Period T0 comprises data from 12 months before Period T1, to predict the outcome in Period T1. The dependent variables thus reflect aggregated data from periods T1 and T2, whereas the independent variables rely on data from periods T0 and T1, which helps prevent reverse causality concerns when predicting the outcomes. Table 2 contains a detailed explanation of the variables.

Dependent variables. We measure total revenue as sales revenue generated with a customer during the respective period. Resale revenue is the volume of sales revenue in a period generated by products or services that the customer previously bought; new sale revenue is sales revenue generated from products bought for the first time in that period (cross-purchase). We use log transformations of all three dependent variables in our subsequent analysis.

Moderators. Financial benefits capture the relative price advantage granted to the customer (i.e., firm-controlled discounts), relative to other customers (Hennig-Thurau, Gwinner, and Gremler 2002). Functional benefits (Palmatier et al. 2006) reflect the share of sales revenue generated by selling highly customized products or services to the customer (e.g., outsourcing logistics operations). Contractual bonds refer to the share of sales revenue from contractually fixed transactions with the customer (e.g., periodic cargo logistics).

Complex growth is the growth rate in the share of revenue generated with complex products in each period (e.g., IT logistics services), indicating relationship intensification (Selnes and Sallis 2003). Product line growth reflects the change in the number of distinct product lines purchased by the customer in each period, signaling its increasing dependence and commitment (Reinartz and Kumar 2003). Variability in the purchase process is measured as the percentage share of sales revenue generated from reconfigured transactions, compared to the previous transaction (e.g., different quantity, price change) (Grewal et al. 2015).

Cross-selling intensity indicates whether sales by an incoming salesperson are more strongly dispersed across different product categories of the selling firm than sales by the leaving salesperson (Schmitz, Lee, and Lilien 2014), which would imply a stronger cross-selling affinity (=1, 0 otherwise). Personal communication intensity reflects whether the incoming salesperson communicates more personally with a customer (e.g., visits rather than phone calls), compared with the leaving salesperson (=1, 0 otherwise).

Control variables. We control for customer interactivity with the selling firm using the number of prior personal visits to the customer (Palmatier, Gopalakrishna, and Houston 2006), the customer's relative importance to the selling firm in the sales region (i.e., share of selling firm's revenue in region generated with this customer; Shi et al. 2017), absolute customer portfolio breadth (i.e., count of distinct product lines), and the customer's portfolio complexity (i.e., revenue share of complex products) in each period. We consider three customer sales trend variables (Shi et al. 2017) to measure sales growth rates prior to the disruption. Dummy variables account for the customer's industry, the sales region, and the sampled quarter.

Insert Table 2 about here

Descriptive Statistics and Comparison of Disruption and Control Groups

The descriptive statistics for the data set are in Table 3. Table 4 illustrates the comparison of the disruption and control groups (Bommaraju et al. 2018; Ho et al. 2007; Shi et al. 2017); it indicates an appropriate balance. Customers in both groups are comparably distributed across industries too; 46.3% of the disruption group and 47% of the control group operate in wholesale and retail trade industries, and 38.1% and 37.5%, respectively, operate in manufacturing industries. We provide some model-free evidence and illustrate common trends for the outcome developments prior to disruptions in Web Appendixes W3 and W4.

Insert Tables 3 and 4 about here

Model Specification and Results

We specified a series of two-period difference-in-differences (DiD) models to test our hypotheses, for which we generated three variables: (1) a dummy indicator of whether a customer belongs to the *disruption* (coded as 1) or *control* group (coded as 0); (2) a dummy indicator reflecting the focal observation *time period*, T1 (period before disruption, coded as 0) or T2 (period after disruption, coded as 1); and (3) the interaction between these dummies, to account for the individual DiD. The DiD regression coefficient reflects the average treatment effect (Bommaraju et al. 2018; Shi et al. 2017), that is, the effect of a disruption on resale revenue (H_1) or new sale revenue (H_2).[5]

Main effects of relationship disruption on total, resale, and new sale revenue. Replicating prior empirical research (Shi et al. 2017), we find that customers who experience a relationship disruption generate –6.8% less total revenue on average (Table 5, Model 0, $b_{Replication} = –.07$, $p < .05$). In line with H_1, customers who experience a relationship disruption generate –28.8% less resale revenue ($b_1 = –.34$, $p < .01$; log transformation of estimated coefficient, see Table 5, Model 1). In support of H_2, customers who experience a relationship disruption also generate 52.2% more new sale revenue ($b_2 = .42$, $p < .01$). Thus, our results affirm that the effects of a relationship disruption can be positive or negative, depending on the type of revenue.[6]

Insert Table 5 about here

Moderating effect of firm-level relationship strength. The results for the moderated effects of a relationship disruption on new sale revenue and resale revenue are illustrated in Table 6 and Figure 2. First, we find support for H_{3a} and H_{3b}: The effect of a relationship disruption on new sale revenue is positively moderated by the financial benefits ($b_{3a} = 1.66$, $p < .05$) and functional benefits ($b_{3b} = 9.20$, $p < .10$) that the customer reaps from the relationship prior to the disruption. At a high level of customer financial benefits for example (+5% above

average), a disruption increases new sale revenue by 21.3%. As expected, we find no significant moderation effect of contractual bonds on the disruption–new sale revenue linkage. Second, in support of H_{4a}–H_{4c}, the effect of a relationship disruption on resale revenue is positively moderated by customers' financial benefits ($b_{4a} = 1.08$, $p < .05$), functional benefits ($b_{4b} = 4.79$, $p < .10$), and contractual bonds ($b_{4c} = 1.03$, $p < .01$).

Insert Table 6 and Figure 2 about here

Moderating effect of firm-level relationship dynamics. In support of H_{5a} and H_{5c}, the effect of a disruption on new sale revenue is negatively moderated by the degree of prior complex growth ($b_{5a} = –.20$, $p < .01$) and prior variability in the purchase process ($b_{5c} = –.99$, $p < .05$). The moderation effect of product line growth is negative, as expected, but not significant ($b_{5b} = –.11$, $p > .10$), so we cannot confirm H_{5b} (Figure 2, Panels A4–A6). We discuss this result subsequently. The effect of a relationship disruption on resale revenue is negatively moderated by the degree of prior complex growth ($b_{6a} = –.13$, $p < .01$) but positively moderated by the degree of prior product line growth ($b_{6b} = .67$, $p < .01$) and the variability of the purchase process prior to disruption ($b_{6c} = .68$, $p < .05$). These findings support H_{6a}–H_{6c} (Figure 2, Panels B4–B6).

Moderating effect of relationship management. With regard to new salespeople's relationship management, we find that the positive effect of a relationship disruption on new sale revenue is stronger when the incoming salesperson offers a broader product portfolio (higher cross-selling intensity) ($b_{7a} = .48$, $p < .05$), in support of H_{7a}. As we predicted in H_{7b}, the negative effect of a relationship disruption on resale revenue is weaker when the incoming salesperson has a higher propensity for personally communicating with customers (higher personal communication intensity) ($b_{7b} = .33$, $p < .01$).

Robustness Tests

To assess the robustness of our findings, we check for the non-randomness of relationship

disruptions and potential differences between the disruption and control groups.

Non-random relationship disruption. One intuitive, potential reason for non-randomness may lie in salesperson's prior performance and turnover. An initial analysis of variances reveals no significant difference in the performance of salespeople with or without disruption though (b = .06, $p > .10$). Furthermore, the performance effects of a disruption do not differ significantly across salespeople who left the firm completely versus those who remain (Web Appendix W7). Thus, the prior performance of the salesperson is unlikely to affect the randomness of relationship disruptions in our study context.

In addition, we conducted a two-stage Heckman selection correction (Heckman 1979), with three variables that were not part of our main analysis, which serve as proxies for higher disruption probability: (1) regional rate of prior relationship disruptions (for similar instruments, see Bommaraju et al. 2018; Saboo et al. 2017; Shi et al. 2017), (2) overall performance of the leaving salesperson, and (3) the performance growth rate of the leaving salesperson. The regional disruption rate satisfies the condition for relevance, because it relates to the occurrence of a relationship disruption for the focal customer (e.g., salesperson turnover), and the exclusion restriction, because relationship disruptions with other customers in the same sales region are unlikely to affect resale revenue and new sale revenue earned from a focal customer (Web Appendix W8). We conduct a probit regression with all the variables from our core analysis and the three newly calculated variables to predict the occurrence of a relationship disruption. Next, we compute and integrate an inverse Mills ratio in our DiD analysis and repeat the hypotheses tests. The findings are robust to this measure of potential selection bias (Web Appendix W8).

Group matching. To account for potential differences between the disruption and control groups, we estimate an average treatment effect (ATE) with propensity score matching, to ensure

good fit between groups (Shi et al. 2017); we compare customers with similar probabilities of experiencing a relationship disruption. For the robustness tests, we separately calculate the ATE for subsamples with high and low levels of each moderator variable, according to mean splits. The estimated ATEs support the findings for all our hypotheses (Web Appendix W9).

Additional Analysis: Relationship Disruptions and Total Revenue

To enhance the managerial relevance of our findings, we consider relationship contexts in which a relationship disruption may cause more harm or benefit to *total revenues*. For this analysis, we rerun our moderation model to predict the contingent development of total revenue. Table 7 illustrates the impact of a relationship disruption for selected combinations of the moderators, reflecting favorable and unfavorable relationship contexts. A context is favorable if the moderators in our framework support positive effects on new sale and/or reduced negative effects on resale revenue (and unfavorable otherwise). In Web Appendix W10, we identify the specific moderator conditions in which relationship disruption lowers or increases total revenue.

Notably, a relationship disruption can increase total sales revenue generated with a customer if the relationship context is favorable; this effect is especially pronounced if the incoming salesperson exhibits greater personal communication intensity or cross-selling intensity compared with the leaving salesperson. A relationship disruption in an unfavorable relationship context generally harms total revenue, but an effective salesperson relationship management design can effectively prevent losses in total revenue.

Insert Table 7 about here

DISCUSSION

Disruptions of customer–salesperson relationships are a widespread, relevant phenomenon that threaten to reduce the performance of customer relationships (Shi et al. 2017). We offer novel insights into these effects by proposing and showing that though a relationship disruption

negatively affects future resale revenue, it can have a *positive* effect on future new sale revenue. Our contingency framework predicts conditions in which each path is outweighing the other, leading to overall performance losses or gains. Notably, the overall effects of relationship disruptions on total revenue can be positive or negative, depending on the context (Table 7).

Theoretical Implications

This study is anchored in relationship marketing research, which has substantially advanced understanding of how customer–salesperson and firm-to-firm relationships unfold and determine firm performance. We contribute in four main ways. First, we derive a conceptual framework that includes both positive and negative effects of relationship disruptions and provide empirical evidence that this ambivalence is inherent to disruptions. Relationship marketing scholars agree that building and maintaining interpersonal relationships is vital to the stability and prosperity of customer–firm interactions (Gupta et al. 2019; Crosby, Evans, and Cowles 1990; Palmatier, Scheer, and Steenkamp 2007), so they caution against disrupting relationships, for fear of undermining hard-earned advantages and diminishing business revenue (Bendapudi and Leone 2002; Habel and Klarmann 2015; Shi et al. 2017). By accounting for distinct effects of relationship disruptions on new sale and resale revenues, we show for the first time that a disruption does not necessarily harm a customer relationship; instead, it even may stimulate new sale revenue, through a relationship development path, emerging from joint need exploration by salespeople and customers in the early stages of the new relationship lifecycle. Recent studies cite joint need exploration as a key process for advancing relationship development (Zhang et al. 2016) and 82% of CEOs expect customers to demand that sellers exhibit better understanding of their needs in the future (IBM Global CEO Study 2010). However, specific strategies for enhancing need identification in the wake of a relationship disruption are not well understood. Additional research should find which strategies and skills

enable salespeople to identify customer needs after a relationship disruption, especially if customers are not fully cognizant of their own needs (Tuli, Kohli, and Bharadwaj 2007).

Second, we theoretically predict and test several relevant relationship contingencies, derived from both MLT and RLT. Prior research on relationship disruptions has cited the salesperson's prior performance and industry expertise as contingencies (Shi et al. 2017), without considering the condition of the affected relationship as a likely moderator. According to relationship marketing research, relationship contingency factors influence relationship development (Palmatier et al. 2006), so we address firm-level relationship strength and dynamics prior to the disruption, as well as salesperson relationship management after it, as pertinent contingency factors. As our theoretical rationale, we acknowledge that these moderators shape customers' motivation to maintain or expand the relationship with the selling firm after the disruption, in accordance with the core tenets of relationship marketing research (Bendapudi and Berry 1997). Note that a customer's motivation to maintain or expand the relationship with the selling firm might hinge on other factors, such as the presence or strength of competitors. Exploring these additional contingencies would be a valuable endeavor for further research.

Third, our results provide additional support for RLT; a relationship's history (strength and dynamics) strongly informs its prospective development (Jap and Anderson 2007). Also in line with RLT, our findings underline the importance of the joint exploration phase to expand the relationship (Zhang et al. 2016). By including relationship disruptions in the relationship lifecycle, we show that a disruption may change the velocity of a relationship, which reenters a phase of new exploration, mutual scanning, and learning (Dwyer, Schurr and Oh 1987; Jap and Anderson 2007; Zhang et al. 2016), leading to new sale revenue. This finding sheds new light on Jap and Anderson's (2007, p. 261) conclusion that a deteriorating relationship pattern is often

difficult to reverse, because “movement through regressive patterns is negatively related to performance, and these relationships do not enjoy a fresh start.” Complementing recent research on transformational relationship events (Harmeling et al. 2015), our study indicates that relationship disruptions may avert the course and give relationships new directions.

Fourth, we integrate MLT and RLT, such that our conceptual model and findings suggest the possibility of a “multilevel relationship lifecycle theory” to predict how customer–firm and customer–salesperson relationships evolve in combination over time. A host of research questions arise from this notion. It would be particularly interesting to identify situations in which the synchronization of both lifecycles is optimal and those in which desynchronized lifecycles (e.g., after relationship disruption) can be beneficial.

Limitations and Further Research

Several limitations of this study suggest avenues for further research. First, the positive disruption effects might seem to imply that firms should disrupt relationships purposefully and repeatedly, to gain continuous new business. We do not find any difference in the effect of disruptions on shorter or longer tenured relationships, but we cannot ignore the possibility that repeatedly disrupting interpersonal ties would frustrate customers and create what Jap and Anderson (2007, p. 272) call “psychological scars”, damaging the relationship. Further research should explore the potentially diminishing returns of repeated disruptions.

Second, future research may explore the effects of disruptions in other contexts. For instance, we did not find an anticipated significant interaction of growth in distinct product lines on new sale revenue. Perhaps the broad product portfolio of our study firm limits saturation effects, even if a customer has recently purchased new products. Further, following Shi et al. (2017) we study relationship disruptions in a context with established relationships between customer firms, the selling firm, and salespeople. This approach was necessary because for a

relationship disruption to occur, by definition a prior relationship needs to exist. Yet, is unlikely that our results replicate in fully transactional contexts.

Third, research that explores the dark side of customer relationships notes potential detriments of strong bonds between salespeople and customers (e.g., Anderson and Jap 2005; Grayson and Ambler 1999; Moorman, Zaltman, and Deshpande 1992). We focus on relationship contingency factors that reflect the strength and dynamics of firm-level relationships; exploring how a relationship disruption affects future performance when the relationship features negative psychological mechanisms (e.g., opportunism, complacency; Lund, Kozlenkova, and Palmatier 2015) could further advance our understanding of the risks and opportunities of disruptions.

Fourth, we explicitly focus on relationship disruptions induced by changing the salesperson. A B2B relationship disruption also might occur if the customer firm's representative changes. We expect our core theoretical reasoning (loyalty and relationship development paths) to hold in these cases too, though some differences may exist (e.g., diminished loyalty losses). Purchasing research could shift the perspective and thereby complement our findings.

Fifth, we focused on selected moderators reflecting relationship strength, dynamics, and management. Further factors (e.g., salesperson's product knowledge, tenure) also could moderate the loyalty and relationship development paths, so we encourage continued research to conceptualize and empirically examine such moderators.

Managerial Implications

The ubiquity of relationship disruptions (Boles et al. 2012; Boichuk et al. 2019; Darmon 2008), their potentially detrimental effects on customer revenue (Shi et al. 2017), and their potential for creating new business opportunities require companies to manage their risks and pursue their opportunities carefully. To that end, our study provides three main sets of actionable implications to help managers (1) prioritize their efforts among customers subject to a

relationship disruption, (2) select which activities to undertake to retain or expand business with prioritized customers, and (3) capitalize on the revitalization of customer relationships.

First, when a relationship disruption is impending (e.g., salesperson's resignation, retirement, or promotion), managers can use our findings to assess their exposure to financial risks and opportunities and prioritize customers accordingly. A *qualitative* assessment demands a thorough understanding of the theoretical mechanisms, namely, that a relationship disruption can have simultaneously negative effects on resale and positive effects on new sale revenue. Then managers could analyze a leaving salesperson's customer relationships according to their characteristics (firm-level strength, recent dynamics) to identify financial risks and opportunities and prioritize which customers to target with retention or expansion efforts. In addition, to understand the financial impacts of a relationship disruption, managers can apply *quantitative* predictive analytics derived from our research. The models we propose can estimate the effects of a relationship disruption on customers' resale, new sale, and total revenues, according to the favorability of the relationship context (Table 7). We implemented predictive analytics for the focal company in this study; for each salesperson's customers, we estimated the expected effects of a disruption on resale, new sale, and total revenues. The results revealed when the company should emphasize customer retention or expansion efforts. To ensure accurate predictions, companies would need to train our model with their own sales and revenue data.

Second, our findings provide guidance for managing prioritized customer relationships and preparing them for an impending disruption. If our model predicts a significant loss of resale revenue, managers should focus on *managing the retention* by fortifying this relationship against the disruption in advance; they could work to foster stronger firm-level ties by offering more benefits to customers (e.g., customization, discounts)[7] or seek to renew contracts. Managers also

should sensitize incoming salespeople to the risks of resale losses and the importance of relationship building. If instead the model predicts a potential rise of new sale revenue, managers should focus on *managing the expansion*, including training salespeople to generate new sale revenues by reexploring needs and offering corresponding and novel products to customers.

Third, to benefit from revitalization and growth in new business, managers might—very carefully—select customer relationships for proactive disruption, even if a disruption would not normally be impending. We strongly urge managers to avoid the conclusion that proactively disrupting an interpersonal relationship is a certain route to increased revenue. Beneficial effects for total revenues only accrue if the specific relationship context is favorable, such as when the firm-level relationship is particularly strong, and if appropriate replacements are available (i.e., incoming salesperson has strong personal communication and cross-selling affinity; Table 7). Even then, managers must consider potential unintended effects, such as reactance and demotivation among the sales staff. So extreme caution is warranted here.

Figure 3 summarizes these implications. If a relationship disruption is impending, the decision tree leads managers to focus on most important activities required to manage risks or seize opportunities. If no disruption is impending, the decision tree provokes thoughts about whether a proactive relationship disruption may benefit the future development of a relationship.

Insert Figure 3 about here

Ultimately, our study serves as a reminder that existing customers' revenue potential may not be fully realized. New salespeople's reexploration of customer needs results, on average, in increased new sale revenue by 50.6%. Managers may instruct salespeople to reexplore customer needs, even in the absence of disruptions—allowing the firm to seize new opportunities.

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FOOTNOTES

[1] We focus on disruptions on the interpersonal relationship level and use the terms "relationship disruption" and "interpersonal relationship disruption" interchangeably. For a detailed discussion of terms and concepts, see the Conceptual Framework section.

[2] Initiating a new interpersonal relationship after a disruption is similar in some ways to new customer acquisition, except that in the former case, the firm has valuable knowledge about the customer (e.g., business model, needs). Thus, the initiation of a new relationship and need exploration should be more efficient than a situation in which no prior customer–firm relationship exists.

[3] We address this alternative explanation in a supplemental analysis in Web Appendix W6. It shows that the results are independent of substitution effects, in support of our argument for H_2.

[4] We provide supplemental information about the firm research context, products, and services in Web Appendix W11.

[5] We provide further details about the model specification in Web Appendix W5.

[6] The effects are not driven by substitution effects among new sale revenue increases and resale losses (Web Appendix W6) and they are stable across subsamples that we derive according to the type of relationship disruption (salesperson leaves vs. remains with the selling firm), disruption timing (first vs. last six months of the year), the duration of the relationship of the customer with the leaving salesperson, the sales region, or the customer's industry (Web Appendix W7).

[7] To identify appropriate investment volumes, managers might estimate the return on investment using their activities' revenue impacts, derived from predictive analytics, as previously described.

TABLE 1
Literature Review on Relationship Disruption Research

Authors	Research Setting	Key dependent variables under investigation	Empirical Strategy	Effects conceptually discussed	Effects empirically tested	Objective Financial Outcomes	Number of Moderators Empirically Tested
Bendapudi and Leone (2002)	Cross-industry B2B companies	• Relationship vulnerability • Customer satisfaction with the vendor firm and the transition procedures • Customer's acceptance of a replacement employee • Employee's willingness and likelihood to share information with vendor firm	Qualitative study comprising • focus groups with 72 participants (managers and key contacts) • depth interviews with 47 managers • survey of 100 managers	Negative	None	No	0
Darmon (1990, 2008)	Conceptual studies including case analyses	• Different types of costs • Different types of benefits	Case studies of a pharmaceutical products sales force and a maintenance product sales force	Negative and positive	None	No	0
Harrison-Walker and Coppett (2003)	Conceptual study including examples from pharmaceutical industry	• Customer defection • Company performance	None	Negative	None	No	0
Lovett, Harrison, and Virick (1997)	Conceptual study	• Risk of customer turnover	None	Negative	None	No	0
Palmatier (2008)	Cross-industry B2B sales representatives	• Customer value	Hierarchal linear modeling on survey data from • 446 customers, nested in • 27 sales representatives	Negative	None	Yes	1
Shi et al. (2017)	U.S.-based distributor of electrical component products	• Total revenue	Difference-in-differences regression on archival data from • 830 customers with relationship disruption (nested in 129 sales reps) • 1,615 customers without relationship disruption (nested in 550 sales reps)	Negative and positive	Negative	Yes	2
Our study	International B2B logistics company that sells standardized postal products and services, as well as transport solutions	• Total revenue • Resale revenue • New sale revenue	• 1,360 customers with relationship disruption • 680 customers without relationship disruption	Negative and positive	Negative and positive	Yes	8

TABLE 2
Constructs' Description, Representative Studies, and Operationalization

Constructs	Description and Conceptual Meaning	Representative Studies	Operationalization in this Study
Performance Indicators (DVs)			
Total Revenue (log)	Total sales revenue generated with customer		Log transformed total revenue generated with the customer in period (T1, T2)
Resale Revenue (log)	Sales revenue generated products previously sold (customer repurchases)	Anderson, Chu, and Weitz 1987; Robinson, Faris and Wind 1967	Log transformed revenue from previously sold products or services to customer in period (T1, T2)
New Sale Revenue (log)	Sales revenue generated by newly sold products (customer cross-purchases)	Anderson, Chu, and Weitz 1987; Schmitz 2013	Log transformed revenue from newly sold products or services to customer in period (T1, T2)
Firm Level Relationship Strength Moderators			
Financial Benefits	Customers' financial benefits expressed by higher discounts compared to other customers indicating past value received by customer	Hennig-Thurau, Gwinner, and Gremler 2002; Ulaga and Eggert 2006	Mean price paid by other customers for focal customer's product portfolio, divided by price paid by focal customer in period (T0, T1)
Functional Benefits	Customers' functional benefits expressed by customized offerings indicating past value received by customer	Palmatier et al. 2006; Gwinner, Gremler, and Bitner 1998	Sales revenues generated with customized products and solutions divided by total revenue generated with customer in period (T0, T1)
Contractual Bonds	Contractual obligation between customer and selling firm through contractually fixed transactions indicates formal (non-value creating) bonds	Jap and Ganesan 2000	Sales revenues generated with contractually fixed transactions divided by total revenue generated with customer in period (T0, T1)
Firm-Level Relationship Dynamics Moderators			
Complex Growth	Recent growth in revenues from complex products through intense coordination of relational partners implies value loss potential and reduced value creation potential after disruption	Selnes and Sallis 2003	Mean growth rate in share of revenues generated with complex products between quarters of the period (T0, T1)
Product Line Growth	Recent growth in distinct product lines bought implies no value loss potential but reduced value creation potential after disruption	Reinartz and Kumar 2003	Mean growth rate in count of distinct product lines purchased by focal customer between quarters of period (T0, T1)
Variability in Purchase Process	Variable purchase process from adaptions in paid price, type, and quantity of repeatedly purchased products implies reduced value creation potential after disruption	Anderson, Chu, and Weitz 1987; Grewal et al. 2015	Comparative measure as percentage share (%) of revenue generated with reconfigured repurchases by the customer compared to last purchase (T0, T1)
Salesperson-Level Relationship Management Moderators			
Cross-Selling Intensity	Incoming salesperson offering a broader product portfolio implies higher value creation for the customer	Schmitz, Lee, and Lilien 2014	Incoming salesperson shows higher sales dispersion[1] among available product categories from the selling firm than prior salesperson (1, 0 otherwise) (T2)
Personal Communication Intensity	Incoming salesperson who prefers personal above non-personal communication with customers implies higher value maintenance for the customer	Reynolds and Beatty 1999; Palmatier et al. 2008	Incoming salesperson shows higher mean ratio of personal visits divided by all contacts at customers than to prior salesperson (1, 0 otherwise) (T2)

Notes: *Resale Revenue* and *New Sale Revenue* add up to *Total Revenue.* Period T0 is 24 to 12 months before the relationship disruption; Period T1 is 12 months before the relationship disruption; and T2 is 12 months after the relationship disruption. [1] Calculated using a Herfindahl index (Schmitz, Lee, and Lilien 2014).

TABLE 3
Descriptive Statistics and Correlations

	1	2	3	4	5	6	7	8	9	10	11
1: Total Revenue (log)											
2: Resale Revenue (log)	.89**										
3: New Sale Revenue (log)	.38**	.21**									
4: Financial Benefit	-.14**	-.14**	-.06**								
5: Functional Benefit	-.03	-.01	.001	-.01							
6: Contractual Bonds	.22**	.09**	.02	.08**	.003						
7: Complex Growth	.10**	.09**	.05**	.01	.004	.05**					
8: Product Line Growth	-.08**	-.26**	.12**	.03	-.04*	.11**	-.02				
9: Variability in Purchase Process	-.09**	-.04*	-.14**	.08**	.01	.12**	.11**	-.03*			
10: Cross-Selling Intensity	-.02	-.004	-.07**	.03	-.02	-.02	-.02	-.02	.02		
11: Personal Communication Intensity	-.07**	-.04*	-.11**	.02	-.02	-.11**	.01	-.02	.05**	.32**	
Mean	10.34	10.13	5.22	1.02	.02	.42	.13	1.20	.17	.09	.07
Standard Deviation	1.80	2.32	2.62	.14	.04	.36	.75	1.03	.25	.29	.25
Min	.63	0	0	.67	0	0	0	.10	0	0	0
Max	17.02	17.02	14.96	1.84	1	1	33.99	25	1	1	1

*$p < .05$. **$p < .01$.
Notes: Two-tailed tests of significance. Variables 1, 2, and 3 are log transformed.

TABLE 4
Differences between Control and Disruption Groups in Period T1

Sample Distribution per Variable in Period T1 (prior to Disruption)	**Control Group**		**Disruption Group**		Std. Mean Diff.[1]	Balance[1]
	Mean	SD	Mean	SD		
1: Total Revenue (log)	10.35	1.92	10.36	1.55	-.01	✓
2: Resale Revenue (log)	9.90	2.93	10.18	1.97	-.14	✓
3: New Sale Revenue (log)	6.02	2.35	5.68	2.31	.15	✓
4: Financial Benefit	1.01	.15	1.02	.14	.07	✓
5: Functional Benefit	.02	.04	.02	.04	.00	✓
6: Contractual Bonds	.44	.36	.40	.36	.15	✓
7: Complex Growth	.15	.65	.13	.48	.05	✓
8: Product Line Growth	1.23	1.16	1.15	.68	.11	✓
9: Variability in Purchase Process	.14	.24	.13	.22	.05	✓

Notes: SD = standard deviation. Freq. = frequency. Std. Mean Diff. = standardized mean difference.
[1] We find no standardized mean difference between our randomly sampled control group and the disruption group greater than .25 (Bommaraju et al. 2018; Ho et al. 2007; Shi et al. 2017), indicating an appropriate balance between control and disruption groups for further analysis. As an additional robustness check, we conducted propensity score matching to account for potential differences in the control group and disruption group (Web Appendix W9).

TABLE 5
Main Effects of Relationship Disruption

Independent Variables (IV)	Hyp.	Model 0: Total Revenue (log) (a) Without controls Est. (SE)	Model 0: Total Revenue (log) (b) With controls Est. (SE)	Model 1: Resale Revenue (log) (a) Without controls Est. (SE)	Model 1: Resale Revenue (log) (b) With controls Est. (SE)	Model 2: New Sale Revenue (log) (a) Without controls Est. (SE)	Model 2: New Sale Revenue (log) (b) With controls Est. (SE)
Treatment Effect of Disruption							
Post-Period Dummy × Rel. Disruption Dummy (DiD)	H_1 (-) H_2 (+)	-.08*** (.03)	-.07** (.03)	-.35*** (.07)	**-.34***** (.07)	.40*** (.15)	**.42***** (.15)
Difference-in-Differences Specification							
Relationship Disruption Dummy		ns	.15** (.06)	.27** (.11)	.44*** (.09)	-.33*** (.11)	-.25** (.10)
Post-Disruption Period		ns	ns	.38*** (.05)	.35*** (.05)	-1.51*** (.08)	-1.55*** (.09)
Control Variables							
Customer's Interactivity with Firm			.30*** (.08)		.26*** (.09)		.39*** (.07)
Customer's Relative Importance			1.86*** (.39)		1.91*** (.42)		.77*** (.25)
Customer's Portfolio Breadth			.11*** (.01)		.13*** (.01)		.06*** (.01)
Customer's Portfolio Complexity			.71*** (.22)		.87*** (.29)		ns
Sales Growth Rate 1			ns		ns		.07*** (.02)
Sales Growth Rate 2			-.01* (.01)		-.02* (.01)		ns
Sales Growth Rate 3			ns		ns		.05** (.02)
Dummies for Industry, Sales Region, and Quarter		Quarter only	Included	Quarter only	Included	Quarter Only	Included
Constant		10.43*** (.06)	8.56*** (.16)	10.01*** (.08)	7.83*** (.24)	6.27*** (.07)	5.05*** (.19)
R-Squared		.020	.459	.019	.378	.085	.161

ns $p > .10$, *$p < .10$, **$p < .05$, ***$p < .01$ (all based on two-tailed tests).

Notes: We report unstandardized coefficients (robust standard errors in brackets are clustered on individual customers) and use log-transformed dependent variables. Similar to Shi et al. (2017), the average treatment effect (DiD) can be interpreted using the transformation of $e^{(coefficient)} - 1$ = percentage change. For example, after relationship disruption, resale revenue decreases by $e^{(-.34)} - 1 = -28.8\%$. Note that our model shows a significant effect of the relationship disruption dummy, indicating a mean difference in the outcome between disruption and control group before disruption. The DiD specification accounts for this mean difference. We check for non-violation of the common trend assumption before disruption in Web Appendix W4. In addition, our model shows a significant effect for the post-period dummy, indicating a mean difference in the outcome variable before-to-after disruption for the control group only. This result is not surprising; developments in a customer's purchasing (independent of relationship disruption) are possible and likely given the timeframe of our analysis. Again, the DiD specification accounts for the mean difference.

TABLE 6
Moderating Effects of Relationship Disruption on New Sale Revenue and Resale Revenue

Independent Variables (IV)	Hyp.	Model 3: Moderation Model **New Sale Revenue (log)** (a) Main effects Est. (SE)	(b) Moderation effects I Est. (SE)	(c) Moderation effects II Est. (SE)	(d) Moderation effects III Est. (SE)	Model 4: Moderation Model **Resale Revenue (log)** (a) Main effects Est. (SE)	(b) Moderation effects I Est. (SE)	(c) Moderation effects II Est. (SE)	(d) Moderation effects III Est. (SE)
Treatment Effect of Disruption									
Post-Period Dummy × Rel. Disruption Dummy (DiD)		.41*** (.15)	.42*** (.15)	.39*** (.15)	ns	-.33*** (.07)	-.29*** (.07)	-.24*** (.06)	-.42*** (.10)
Main Effects Relationship Strength									
Financial Benefit		-.53* (.30)	-.83*** (.31)	-.81*** (.31)	-.81*** (.31)	-1.35*** (.29)	-1.57*** (.33)	-1.55*** (.33)	-1.54*** (.33)
Functional Benefit		ns	ns	ns	ns	ns	ns	ns	ns
Contractual Bonds		ns	ns	ns	ns	.71** (.13)	.58*** (.14)	.58*** (.14)	.58*** (.14)
Main Effects Relationship Dynamics									
Complex Growth		ns	ns	.18** (.07)	.18** (.07)	ns	ns	.15*** (.04)	.14*** (.04)
Product Line Growth		.36*** (.08)	.36*** (.08)	.36*** (.09)	.36*** (.09)	-.44*** (.06)	-.44*** (.06)	-.48*** (.07)	-.48*** (.07)
Purchase Process Variability		.80*** (.17)	.80*** (.17)	.94*** (.19)	.94*** (.19)	.43*** (.16)	.43*** (.16)	.34* (.18)	.34* (.18)
Moderation Effects Relationship Strength									
Financial Benefit	$H_{3a}(+)$ $H_{4a}(+)$		1.77** (.78)	1.70** (.79)	1.66** (.79)		1.12** (.53)	1.11** (.51)	1.08** (.51)
Functional Benefit	$H_{3b}(+)$ $H_{4b}(+)$		9.34* (4.96)	9.18* (5.04)	9.20* (4.93)		ns	ns	4.79* (2.79)
Contractual Bonds	$H_{4c}(+)$		ns	ns	ns		.86*** (.20)	.93*** (.19)	1.03*** (.20)
Moderation Effects Relationship Dynamics									
Complex Growth	$H_{5a}(-)$ $H_{6a}(-)$			-.20*** (.07)	-.20*** (.07)			-.13*** (.05)	-.13*** (.05)
Product Line Growth	$H_{5b}(-)$ $H_{6b}(+)$			ns	ns			.66*** (.10)	.67*** (.10)
Purchase Process Variability	$H_{5c}(-)$ $H_{6c}(+)$			-.92** (.42)	-.99** (.42)			.63** (.30)	.68** (.30)
Moderation Effects Relationship Management									
Cross-Selling Intensity	$H_{7a}(+)$				.48** (.21)				ns
Personal Communication Intensity	$H_{7b}(+)$				ns				.33*** (.11)
Control Variables									
Disruption Dummy, Post-Disruption Period, Control Terms and Variables		Included	Included	Included	Included	Included	Included	Included	Included
Constant		4.43*** (.42)	4.76*** (.43)	4.61*** (.44)	4.58*** (.44)	9.21*** (.39)	9.50*** (.42)	9.59*** (.42)	9.59*** (.43)
R-Squared		.186	.189	.190	.192	.429	.433	.439	.440

ns $p > .10$, *$p < .10$, **$p < .05$, ***$p < .01$ (all based on two-tailed tests).

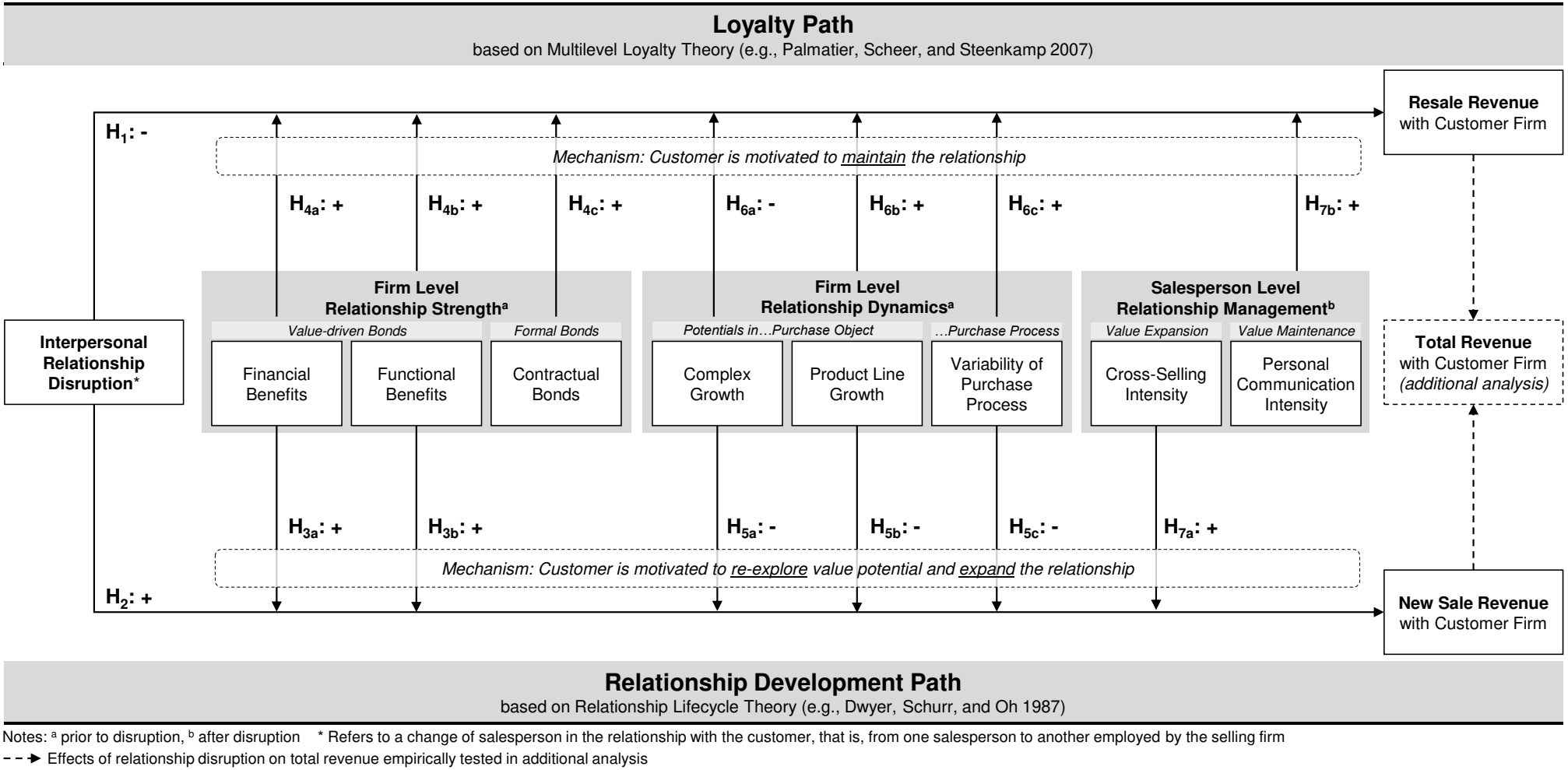
Notes: We report unstandardized coefficients (robust standard errors in brackets are clustered on individual customers) and use log-transformed dependent variables. Similar to Shi et al. (2017), the moderating effect can be interpreted using the transformation of $e^{(coefficient)} - 1$ = percentage change. For example, customers that received 10% higher financial benefits than other customers prior to the disruption generate increased new sale revenue of (e(1.66)-1)*10 = +42.6% after the relationship disruption.

TABLE 7
Relationship Disruption and Total Revenue in Favorable and Unfavorable Relationship Contexts

Relationship Conditions before Disruption			**Disruption Effect on Total Revenue**		
			Average Effect	Effect at higher **Cross-Selling** after Disruption	Effect at higher **Personal Communication** after Disruption
Positive Total Effects Expected if…					
Context 1 Favorable Firm-Level Strength	Financial Benefits Functional Benefits Contractual Bonds Complex Growth Product Line Growth	High High High Ø Ø	**None**	**None**	**+21.8%**
Context 2 Favorable Firm-Level Dynamics	Financial Benefits Functional Benefits Contractual Bonds Complex Growth Product Line Growth	Ø Ø Ø Low High	**+10.7%**	**+16.9%**	**+28.9%**
Context 3 Favorable Firm-Level Strength and Dynamics	Financial Benefits Functional Benefits Contractual Bonds Complex Growth Product Line Growth	High High High Low High	**+22.6%**	**+29.7%**	**+41.1%**
Negative Total Effects Expected if…					
Context 4 Unfavorable Firm-Level Strength	Financial Benefits Functional Benefits Contractual Bonds Complex Growth Product Line Growth	Low Low Low Ø Ø	**-13.2%**	**None**	**None**
Context 5 Unfavorable Firm-Level Dynamics	Financial Benefits Functional Benefits Contractual Bonds Complex Growth Product Line Growth	Ø Ø Ø High Low	**-16.7%**	**-11.9%**	**None**
Context 6 Unfavorable Firm-Level Strength and Dynamics	Financial Benefits Functional Benefits Contractual Bonds Complex Growth Product Line Growth	Low Low Low High Low	**-24.7%**	**-20.5%**	**None**

Notes: The high value of each moderator is +½ standard deviation, and the low value is -½ standard deviation; Ø is the mean value. We did not alter the variability values for the purchase process due to countervailing effects on resale revenue and new sale revenue. Favorable/unfavorable context refers to extreme conditions of the prior relationship, where combinations of all mentioned moderator conditions are simultaneously true. For example, total revenue increases by 22.6% on average after disruption only if, prior to the disruption, financial benefits for the customer were high, functional benefits were high, contractual bonds were high, complex growth was low, and product line growth was high.

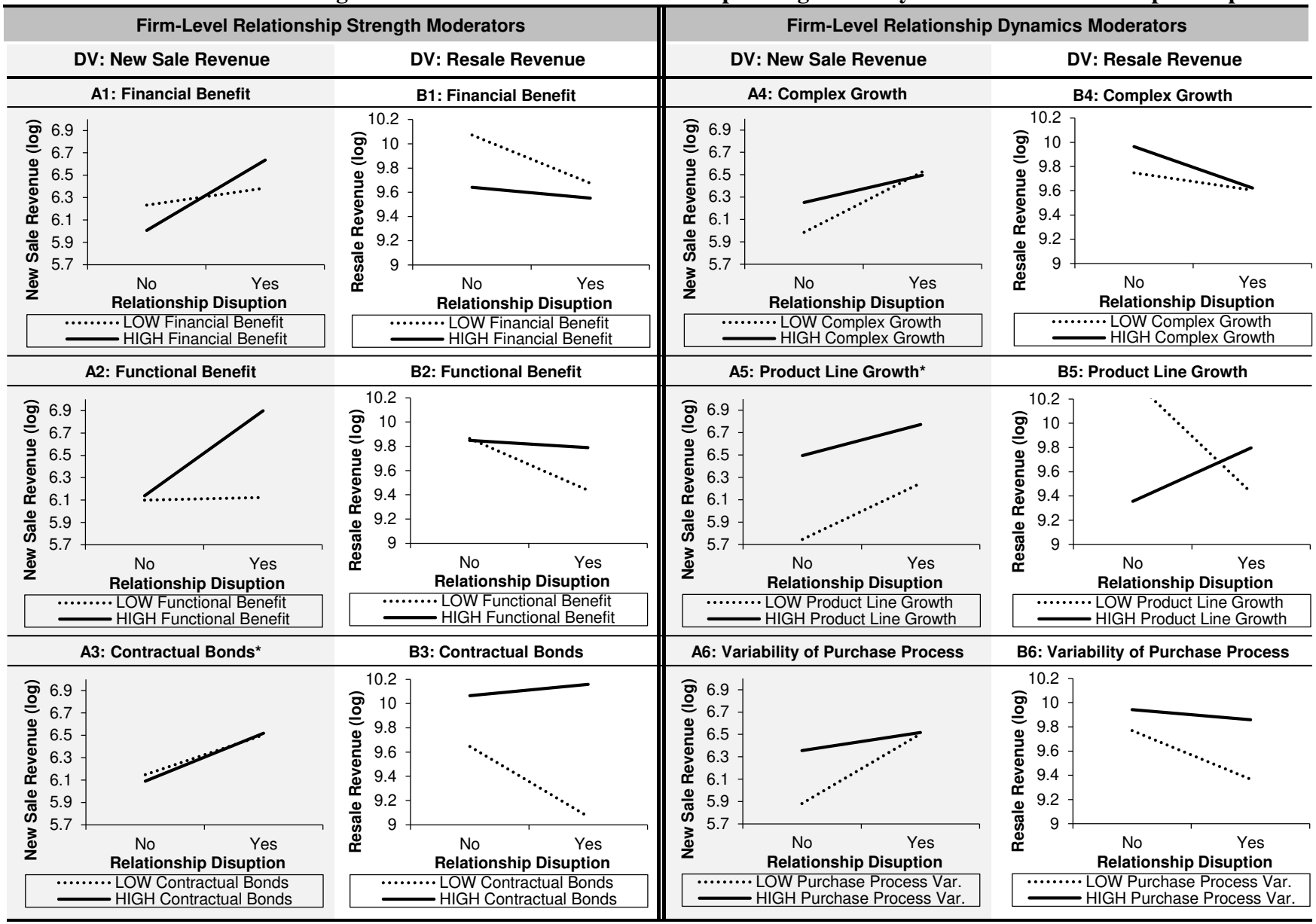
FIGURE 1
Conceptual Framework and Hypotheses



Notes: [a] prior to disruption, [b] after disruption * Refers to a change of salesperson in the relationship with the customer, that is, from one salesperson to another employed by the selling firm

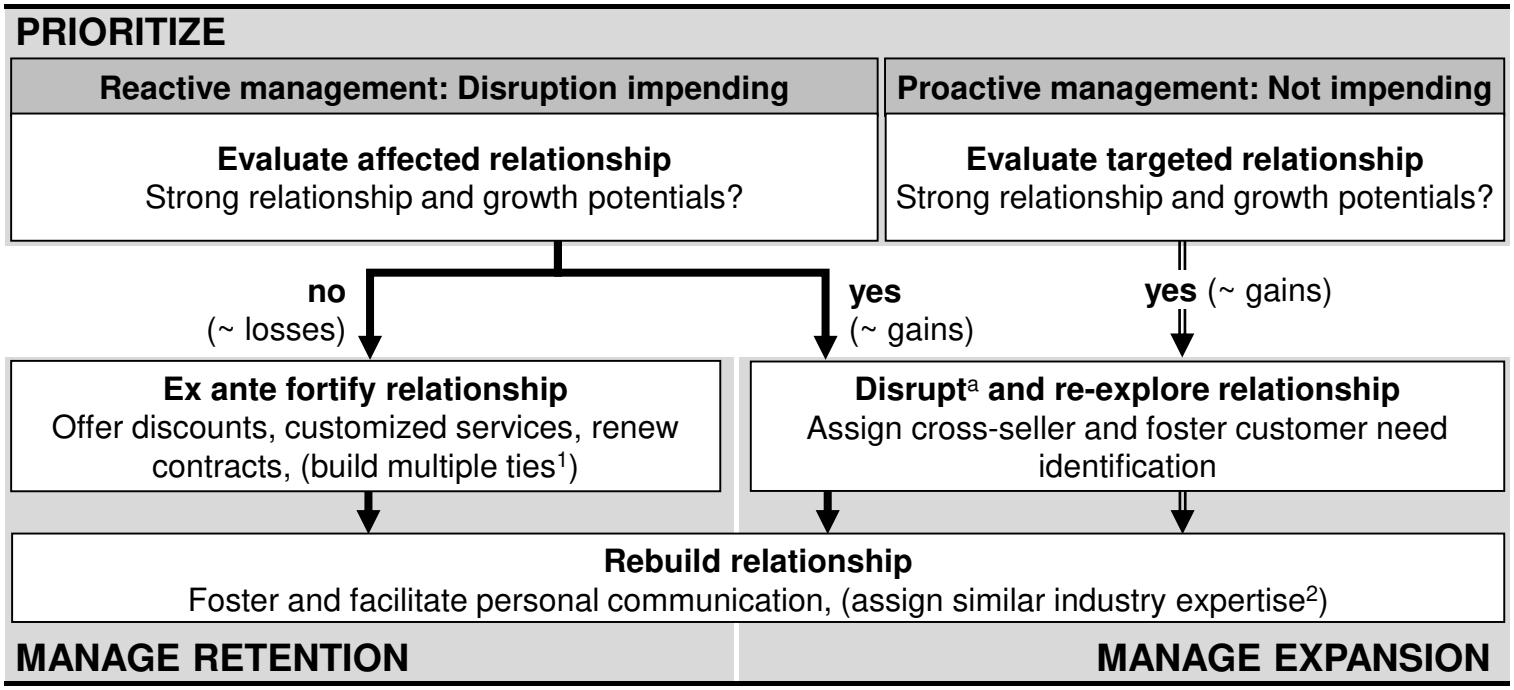
- - → Effects of relationship disruption on total revenue empirically tested in additional analysis

FIGURE 2
Interaction Plots of Moderating Influence of Firm-Level Relationship Strength and Dynamics and Relationship Disruption



Notes: Low/high value of the moderator reflects one standard deviation below/above the mean value. * Interaction not significant.

FIGURE 3
Decision Guide for Managerial Practice



[1] Palmatier 2008; [2] Shi et al. 2017. [a] Carefully decide on proactive disruption if cross-seller available and potential resale losses neglectable.

APPENDIX
Description of Preliminary Study

Position	**Age in Years**	**Length of Interview** (minutes)	**Type of Interview**	**Industry**
Sales Manager (SM1)	35-40	30	Telephone	Wholesale
Sales Manager (SM2)	35-45	46	In person	Pharmaceutical industry
Director Sales (SM3)	50-60	45	In person	Engineering
Sales Manager (SM4)	40-45	62	In person	Pharmaceutical industry
Sales Manager (SM5)	50-60	72	In person	Manufacturing
Sales Manager (SM6)	45-55	28	Telephone	Manufacturing
Sales Manager (SM7)	40-50	29	Telephone	Manufacturing
Sales Manager (SM8)	50-60	20	Telephone	Manufacturing
Purchasing Manager (PM1)	40-55	34	In person	Manufacturing
Purchasing Manager (PM2)	45-55	52	In person	Professional services
Purchasing Manager (PM3)	45-55	28	Telephone	Manufacturing

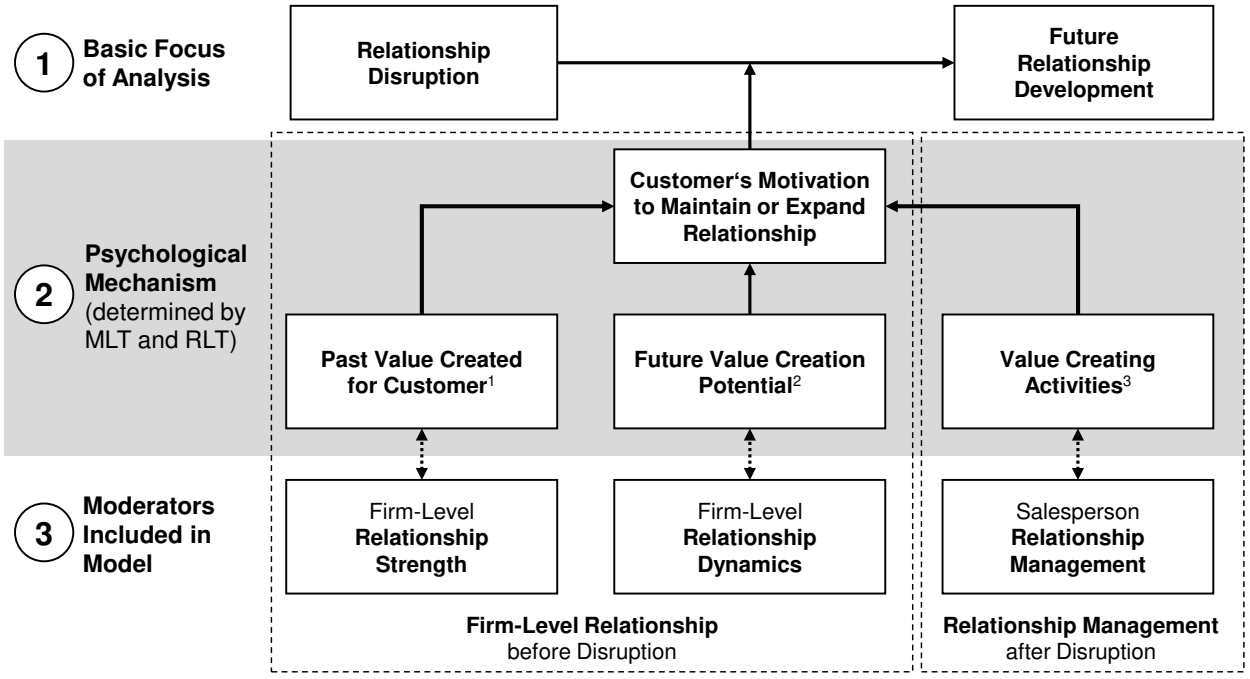
Notes: To acquire the sample of interview partners, we approached existing company contacts and asked for referrals to their sales and purchasing functions. Interviews were audiotaped and subsequently transcribed verbatim. Following common practice in qualitative research, we analyzed the transcripts by coding statements according to their underlying themes (e.g., Macdonald, Kleinaltenkamp, and Wilson 2016).

WEB APPENDIXES

Web Appendix W1
Overview of Preliminary Manager Survey

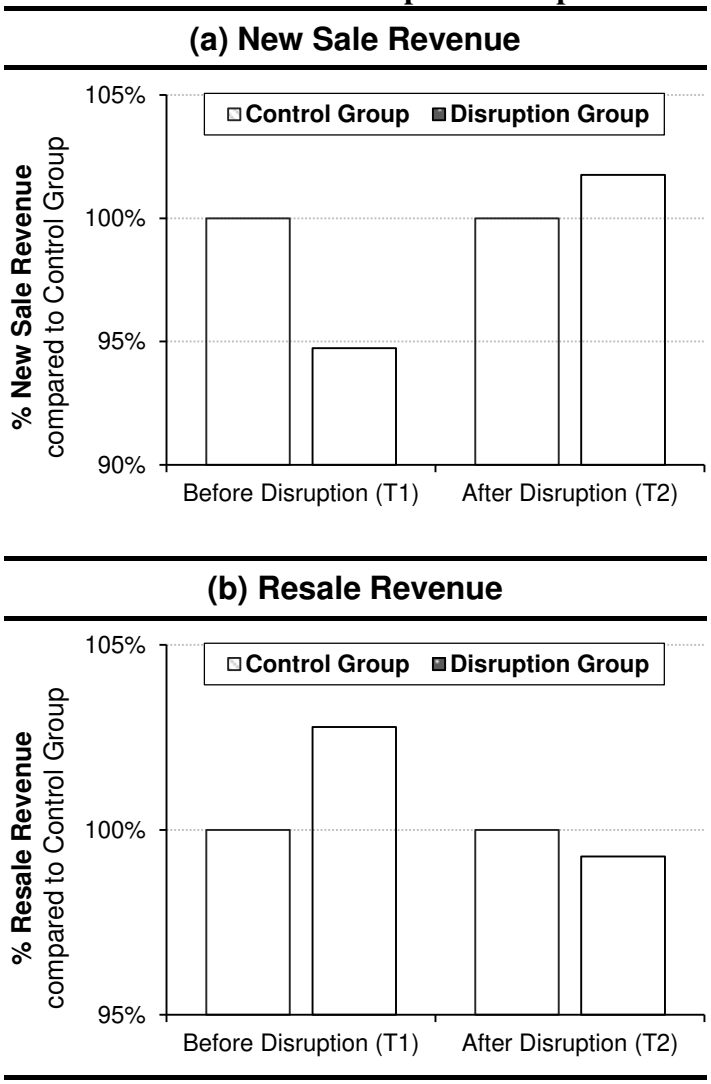
Survey Statistics	**Respondents** N=273					
Demographics	**Gender:** 39.1% female, 60.9% male		**Age:** Ø 46.5		**Job Experience** (Years) Ø 20.5	
Respondent's Position	Operative Purchasing	Strategic Purchasing	Head of Purchase	Head of Business Unit	General Management	Other
	16.1%	6.9%	4.6%	10.3%	44.3%	17.8%
Industry	Software/IT	Industry/ Manufacturing	Finance/ Banking	Professional Services	Government	Other
	8.1%	16.9%	9.9%	33.1%	15.7%	16.3

Web Appendix W2
Relationship disruptions can benefit performance, if customer perceives relationship as valuable, anticipates further value potentials and experiences value creating activities after disruption



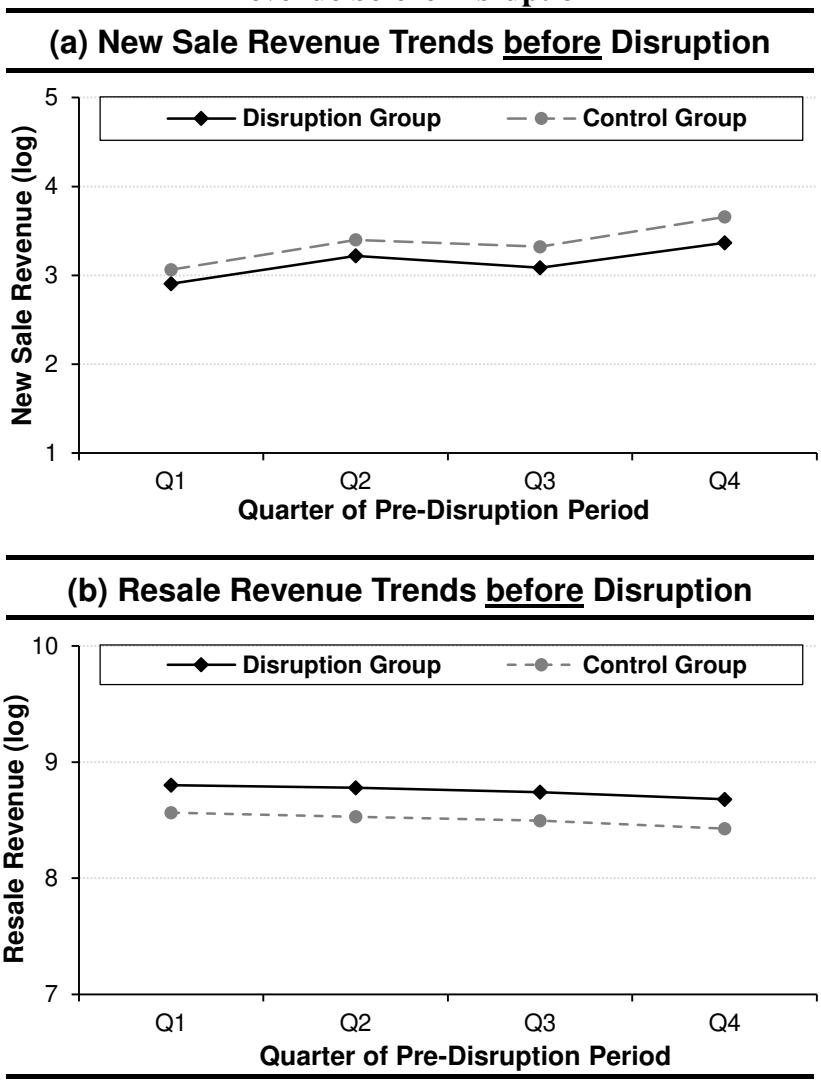
MLT = Multilevel Loyalty Theory (e.g., Palmatier, Scheer, and Steenkamp 2007); RLT = Relationship Lifecycle Theory (e.g., Dwyer, Schurr, and Oh 1987); [1] e.g., Palmatier et al. 2006; [2] e.g., Palmatier et al. 2013; [3] e.g., Palmatier et al. 2008.

Web Appendix W3
Model Free-Evidence: Relative Development of (a) New Sale Revenue and (b) Resale Revenue for Disruption Group



Notes: The y-axis reflects the relative difference in (a) new sale revenue or (b) resale revenue between the disruption group and the control group. T1 reflects 12 month before disruption, T2 reflects 12 month after disruption.

Web Appendix W4
Evaluation of Common Trends: Development of (a) New Sale Revenue and (b) Resale Revenue before Disruption



Notes: Q1-Q4 reflect the four quarters of the period before the customer experienced an interpersonal relationship disruption.

Web Appendix W5
Model Specification

Basic Difference-in-Differences Specification with Two Time Periods and One Treatment

$$(1)\ y_{it} = b_0 + b_1\text{Treatment}_i + b_2\text{Post\_Period}_t + b_3\text{Disruption}_i \times \text{Post\_Period}_t + \varepsilon_{it},$$

where y is the outcome, Treatment is a time-invariant dummy indicating if individual i pertains to the control (0) or treatment group (1), Post_Period is a time-varying dummy reflecting whether the observation is measured before (0) or after the treatment (1), and ε is the random error component. The subscript i refers to an individual customer, and the subscript t reflects the related time period (before or after the treatment) of the observation.

Main Effect Model Specification (Models 0, 1, and 2, in Table 5)

$$\begin{aligned}(2)\ \text{Total\_Revenue}_{it} &= b_0 + b_1\text{Disruption}_i + b_2\text{Post\_Period}_t \\ &+ b_3\text{Disruption}_i \times \text{Post\_Period}_t \\ &+ b_4\text{Customer's\_Interactivity\_with\_Firm}_{it} \\ &+ b_5\text{Customer's\_Relative\_Importance}_{it} \\ &+ b_6\text{Customer's\_Portfolio\_Breadth}_{it} \\ &+ b_7\text{Customer's\_Portfolio\_Complexity}_{it} \\ &+ b_8\text{Sales\_Growth\_Rate\_1}_{it} \\ &+ b_9\text{Sales\_Growth\_Rate\_2}_{it} \\ &+ b_{10}\text{Sales\_Growth\_Rate\_3}_{it} \\ &+ b_{11}\text{Industry\_Dummies}_i \\ &+ b_{12}\text{Sales\_Region\_Dummies}_i \\ &+ b_{13}\text{Quarter\_Dummies}_i \\ &+ \varepsilon_{it}\end{aligned}$$

$$\begin{aligned}(3)\ \text{Resale\_Revenue}_{it} &= b_0 + b_1\text{Disruption}_i + b_2\text{Post\_Period}_t \\ &+ b_3\text{Disruption}_i \times \text{Post\_Period}_t \\ &+ b_4\text{Customer's\_Interactivity\_with\_Firm}_{it} \\ &+ b_5\text{Customer's\_Relative\_Importance}_{it} \\ &+ b_6\text{Customer's\_Portfolio\_Breadth}_{it} \\ &+ b_7\text{Customer's\_Portfolio\_Complexity}_{it} \\ &+ b_8\text{Sales\_Growth\_Rate\_1}_{it} \\ &+ b_9\text{Sales\_Growth\_Rate\_2}_{it} \\ &+ b_{10}\text{Sales\_Growth\_Rate\_3}_{it} \\ &+ b_{11}\text{Industry\_Dummies}_i \\ &+ b_{12}\text{Sales\_Region\_Dummies}_i \\ &+ b_{13}\text{Quarter\_Dummies}_i \\ &+ \varepsilon_{it}\end{aligned}$$

$$
\begin{aligned}
(4)\ New\_Sale\_Revenue_{it} = {} & b_0 + b_1 Disruption_i + b_2 Post\_Period_t \\
& + b_3 Disruption_i \times Post\_Period_t \\
& + b_4 Customer's\_Interactivity\_with\_Firm_{it} \\
& + b_5 Customer's\_Relative\_Importance_{it} \\
& + b_6 Customer's\_Portfolio\_Breadth_{it} \\
& + b_7 Customer's\_Portfolio\_Complexity_{it} \\
& + b_8 Sales\_Growth\_Rate\_1_{it} \\
& + b_9 Sales\_Growth\_Rate\_2_{it} \\
& + b_{10} Sales\_Growth\_Rate\_3_{it} \\
& + b_{11} Industry\_Dummies_i \\
& + b_{12} Sales\_Region\_Dummies_i \\
& + b_{13} Quarter\_Dummies_i \\
& + \varepsilon_{it}
\end{aligned}
$$

In these equations, Total_Revenue, Resale_Revenue, and New_Sale_Revenue are log-transformed outcome variables for each customer i in period t; Disruption is a time-invariant dummy reflecting whether individual i is in the control (0) or disruption group (1); Post_Period is a time-varying dummy reflecting whether the observation is measured before (0) or after the disruption (1); ε is the random error component; the subscript i relates to an individual customer; and the subscript t reflects the related time period (before or after the disruption). We calculate independent variables using data from T0 and T1 ($t^{IV} = 0$ reflects data from T0; $t^{IV} = 1$ reflects data from T1) and the dependent variables using data from T1 and T2 ($t^{DV} = 0$ reflects data from T1; $t^{DV} = 1$ reflects data from T2) to prevent the possibility of reverse causality.

Moderated Effect Model Specification (Models 3d, 4d in Table 6)

$$
\begin{aligned}
(5)\ New\_Sale\_Revenue_{it} = {} & b_0 + b_1 Disruption_i + b_2 Post\_Period_t \\
& + b_3 Disruption_i \times Post\_Period_t \\
& + b_4 Financial\_Benefit_{it} \times Disruption_i \times Post\_Period_t \\
& + b_5 Functional\_Benefit_{it} \times Disruption_i \times Post\_Period_t \\
& + b_6 Contractual\_Bonds_{it} \times Disruption_i \times Post\_Period_t \\
& + b_7 Complex\_Growth_{it} \times Disruption_i \times Post\_Period_t \\
& + b_8 Product\_Line\_Growth_{it} \times Disruption_i \times Post\_Period_t \\
& + b_9 Purchase\_Process\_Variability_{it} \times Disruption_i \times Post\_Period_t \\
& + b_{10} Cross\text{-}Selling\_Intensity_{it} \times Disruption_i \times Post\_Period_t \\
& + b_{11} Personal\_Communication\_Intensity_{it} \times Disruption_i \times Post\_Period_t \\
& + b_{12} Financial\_Benefit_{it} \\
& + b_{13} Functional\_Benefit_{it}
\end{aligned}
$$

$$
\begin{aligned}
&+ b_{14}\text{Contractual\_Bonds}_{it} \\
&+ b_{15}\text{Complex\_Growth}_{it} \\
&+ b_{16}\text{Product\_Line\_Growth}_{it} \\
&+ b_{17}\text{Purchase\_Process\_Variability}_{it} \\
&+ b_{18}X_{it} \\
&+ \varepsilon_{it}.
\end{aligned}
$$

$$
\begin{aligned}
(6)\ \text{Resale\_Revenue}_{it} &= b_0 + b_1\text{Disruption}_i + b_2\text{Post\_Period}_t \\
&+ b_3\text{Disruption}_i \times \text{Post\_Period}_t \\
&+ b_4\text{Financial\_Benefit}_{it} \times \text{Disruption}_i \times \text{Post\_Period}_t \\
&+ b_5\text{Functional\_Benefit}_{it} \times \text{Disruption}_i \times \text{Post\_Period}_t \\
&+ b_6\text{Contractual\_Bonds}_{it} \times \text{Disruption}_i \times \text{Post\_Period}_t \\
&+ b_7\text{Complex\_Growth}_{it} \times \text{Disruption}_i \times \text{Post\_Period}_t \\
&+ b_8\text{Product\_Line\_Growth}_{it} \times \text{Disruption}_i \times \text{Post\_Period}_t \\
&+ b_9\text{Purchase\_Process\_Variability}_{it} \times \text{Disruption}_i \times \text{Post\_Period}_t \\
&+ b_{10}\text{Cross-Selling\_Intensity}_{it} \times \text{Disruption}_i \times \text{Post\_Period}_t \\
&+ b_{11}\text{Personal\_Communication\_Intensity}_{it} \times \text{Disruption}_i \times \text{Post\_Period}_t \\
&+ b_{12}\text{Financial\_Benefit}_{it} \\
&+ b_{13}\text{Functional\_Benefit}_{it} \\
&+ b_{14}\text{Contractual\_Bonds}_{it} \\
&+ b_{15}\text{Complex\_Growth}_{it} \\
&+ b_{16}\text{Product\_Line\_Growth}_{it} \\
&+ b_{17}\text{Purchase\_Process\_Variability}_{it} \\
&+ b_{18}X_{it} \\
&+ \epsilon_{it}.
\end{aligned}
$$

In these equations, X_{it} reflects time-invariant (i) and time-varying (it) control terms and variables.

Web Appendix W6
Analysis of Substitution Effects

As initial test, we compare the correlations among the developments of new sale revenue and resale revenue prior to and after a relationship disruption. If substitution effects bias our results, sales developments (of resale and new sale revenues) could correlate negatively and more strongly among customers who have experienced a relationship disruption, relative to the control group customers. We find similar negative correlations in the developments of resale and new sale revenues in the disruption group (–.22) and control groups (–.19). The correlations do not differ significantly (no overlap of confidence intervals), so the results suggest that some share of new sale business regularly stems from substituting for existing products, independent of the occurrence of a relationship disruption.

To isolate the potential substitution effect further, we also directly adjusted our new sale revenue measure by substituting revenues (net new sale revenues). The cooperating company provided data about the characteristics of its product portfolio, including the substitution relationships of specific products. We cross-validated these relationships by exploring negative correlations among the sales development of substituting products. Thus we identified 162 potential substitution relationships and adjusted our new sale revenue measure by excluding these revenues. With a seemingly unrelated regression (Zellner 1963), we explore whether a relationship disruption also positively affects non-substituting net new sale revenue, with an effect that is significantly different from the influence on the regular new sale revenue measure (Table W6). An interpersonal relationship disruption increases non-substituting new sale revenue ($b = .44$, $p < .01$), such that substitution effects seem to hamper the relative new sale revenue gains after relationship disruption by about 5.6%. The difference between effects is not significant (posterior Wald test, $p > .10$). Therefore, new sale revenue gains following a

relationship disruption do not appear unduly rooted in substitution effects and instead may be explained by the identification of new customer needs.

Table W6
Substitution Analysis Using Seemingly Unrelated Regression Technique

Treatment Effect of Disruption on New Sale Revenue and Non-Substituted New Sale Revenue	New Sale Revenue DiD_1 Est. (SE)	Net New Sale Revenue (non-substituting) DiD_2 Est. (SE)
Average Disruption Effect		
Post-Period Dummy × Rel. Disruption Dummy (DiD)	.42*** (.15)	.44*** (.15)
Control Variables and Effects	included	included
Wald Test Null Hypothesis $DiD_1 = DiD_2$	p>.10	

*p < .10, **p < .05, ***p < .01 (all based on two-tailed test).
Notes: Sample size n = 2040. DiD Est. = Estimate for the difference in difference, reflecting average treatment effect. To obtain robust results, we included all control variables from our main effect analysis and the predictors of the moderation analysis into the model estimation. Effects are not displayed in this table for clarity.

Zellner, Arnold (1963), “Estimators for Seemingly Unrelated Regression Equations: Some exact Finite Sample Results," *Journal of the American Statistical Association*, 58 (304), 977-992.

Web Appendix W7
Robustness Check: Estimate Stability

We test for stability of the effects across various subsamples (Table W7). To compare treatment effects of a disruption among subsamples, we split the disruption treatment dummy, indicating the occurrence of a disruption and membership to Groups 1 or 2, such as customers in the wholesale and retail industry (Group 1) or other industries (Group 2). We then constructed two difference-in-differences (DiD) estimators by calculating the interaction effects for each disruption treatment dummy and the time dummy. The illustrated effects reflect the average disruption effect per subsample. A posterior Wald test of parameter equality (null hypothesis) refers to treatment effects of both comparison groups. To attain robust results, we include all control variables from our main effect analysis and the predictors of our moderation analysis in the model estimation.

First, we test whether the effect of a relationship disruption significantly differs when the salesperson leaves or remains employed in the selling firm (Model A). We find no significant difference ($p > .10$), so the effects are not substantively affected by a salesperson's potential defection to competitors and related purchase shifts to competitors (e.g., Palmatier, Scheer, and Steenkamp 2007). Second, we test whether the effects are biased by seasonal business heterogeneity (Model B) by comparing the effect of disruptions in the first six versus last six months of 2014. Again, we find no significant difference ($p > .10$), so the results remain stable across seasons. Third, we identify interpersonal relationship with short versus long tenures (Model C) according to whether disruptions occurred in the year prior to the timeframe we used in our main analysis (2011). They are short tenure if the relationship had been recently disrupted, prior to the time considered in our main analysis. The results indicate no significant differences, so the tenure of the prior relationship does not appear to indicate risks or opportunities of

relationship disruptions. Fourth, we compare the stability of our estimates across sales regions and customer industries, in terms of customers in the largest sales region (largest industry, namely, wholesale and retail) with customers in other sales regions (industries). The results show no significant differences ($p > .10$), so the estimates are stable across industries and sales regions.

TABLE W7
Robustness Check: Differences in Average Disruption Effect between Subsamples

Average Disruption Effect per Subsample	**New Sale Revenue** DiD Est. (SE)	**Resale Revenue** DiD Est. (SE)
Model A: Differences in Disruption Type		
(A1) disruption due to salesperson departure/turnover	.32* (.17)	*-.33*** (.09)*
(A2) disruption due to restructuring and reassignment	.61*** (.22)	*-.33*** (.08)*
Wald Test Null Hypothesis (A1) = (A2)	*p*>.10	*p*>.10
Model B: Differences in Disruption Time		
(B1) disruption at first 6 month of 2014	.30* (.25)	-.38*** (.06)
(B2) disruption at last 6 month of 2014	.71*** (.25)	-.21 (.16)
Wald Test Null Hypothesis (B1) = (B2)	*p*>.10	*p*>.10
Model C: Tenure-Related Differences		
(C1) disruption at short interpersonal relationship tenure	.48*** (.17)	-.28*** (.09
(C2) disruption at long interpersonal relationship tenure	.29 (.22)	-.42*** (.07)
Wald Test Null Hypothesis (C1) = (C2)	*p*>.10	*p*>.10
Model D: Regional Differences		
(D1) disruption at customer in largest sales region	.33 (.22)	-.39*** (.08)
(D2) disruption at customer in other regions	.47*** (.18)	-.30*** (.09)
Wald Test Null Hypothesis (D1) = (D2)	*p*>.10	*p*>.10
Model E: Industry Differences		
(E1) disruption at customer in Wholesale and Retail Industry	.37* (.19	-.32*** (.07)
(E2) disruption at customer in other Industries	.47*** (.18)	-.31*** (.09)
Wald Test Null Hypothesis (E1) = (E2)	*p*>.10	*p*>.10

*$p < .10$, **$p < .05$, ***$p < .01$ (all based on two-tailed test)
Notes: Sample size n = 2040. DiD Est. = Estimate for difference in difference, reflecting average treatment effect. We report unstandardized coefficients (robust standard errors in brackets are clustered on individual customers). Control effects are not displayed in this table for clarity.

Web Appendix W8
Robustness Check: Non-Randomness of Interpersonal Relationship Disruption

With a two-stage Heckman selection correction (Heckman 1979), we account for the potential non-randomness of relationship disruptions that might be unobserved in our core analysis. We calculated three additional variables that were not part of our core analysis but that might predict the probability of a relationship disruption: (1) regional disruption rate, (2) overall performance of the prior salesperson, and (3) the performance growth rate of the prior salesperson. The regional disruption rate (disruptions for other customers in the same sales region) serves as the instrument for the selection correction. Recent research has used similar instruments that reflect the treatment's influence in a peer region, a peer industry, or a proximal peer group (Bommaraju et al. 2018; Saboo et al. 2017; Shi et al. 2017). A regional disruption rate satisfies the condition for relevance, because it is related to the occurrence of a relationship disruption at the focal customer, and it satisfies the exclusion restriction, because it is unrelated to resale revenue and new sale revenue with the specific, individual customer (i.e., not correlated with the error term of our main regressions). First, when a salesperson changes (e.g., illness, job rotation, turnover), customers may be reassigned to other salespeople, and the relationship disruption for the focal customer strongly relates to relationship disruptions for other customer relationships in the same sales region, satisfying the relevance criterion. Second, relationship disruptions between the selling firm and other customers within the same sales region are unlikely to affect business with the focal customer; information about these other disruptions might not even be available to the focal customer, and even if that customer is aware of them, the information is unlikely to affect its demand for the products and services of the selling firm.

In a probit regression with all the variables from our core analysis and the three newly calculated variables, we predict the relationship disruption (Table W8A). Next, we compute and

integrate the inverse Mills ratio in our DiD analysis and repeat the hypotheses tests. The results indicate that our findings are robust to potential selection bias (Table W8B).

Bommaraju, Raghu, Michael Ahearne, Zachary R. Hall, Seshadri Tirunillai, and Son. K. Lam (2018), "The Impact of Mergers and Acquisitions on the Sales Force," *Journal of Marketing Research*, 55 (2), 254-264.

Heckman, James J. (1979), "Sample Selection Bias as a Specification Error," *Econometrica*, 47 (1), 153–162.

Saboo, Alok R., Amalesh Sharma, Anindita Chakravarty, and V. Kumar (2017), "Influencing Acquisition Performance in High-Technology Industries: The Role of Innovation and Relational Overlap," *Journal of Marketing Research*, 54 (2), 219-238.

Shi, Huanhuan, Shrihari Sridhar, Rajdeep Grewal, and Gary Lilien (2017), "Sales Representative Departures and Customer Reassignment Strategies in Business-to-Business Markets," *Journal of Marketing*, 81 (2), 25-44.

TABLE W8A
Heckman Selection Model (1) Probit Regression

Independent Variable (Pre-Disruption)	**DV: Disruption** (yes/no) Est. (SE)
Regional Disruption Rate	-6.72*** (.95)
Salesperson Performance	.018 (.02)
Salesperson Performance Growth	.017* (.01)
Financial Benefit	.22 (.22)
Functional Benefit	-1.08 (.72)
Contractual Bonds	-.17* (.09)
Complex Growth	-.02 (.05)
Product Line Growth	-.06* (.04)
Purchase Process Variability	.01 (.14)
Customer's Interactivity with Firm	-.01 (.06)
Customer's Relative Importance	-.11 (.14)
Customer's Portfolio Breadth	.003 (.004)
Customer's Portfolio Complexity	-.13 (.23)
Sales Growth Rate 1	-.01 (.02)
Sales Growth Rate 2	-.002 (.01)
Sales Growth Rate 3	.001 (.01)
Industry, Sales Region and Quarter Fixed Effects	Included
Constant	-1.83*** (.51)
Pseudo R-Squared	.071

ns $p > .10$, *$p < .10$, **$p < .05$, ***$p < .01$ (all based on two-tailed test).
Notes: Sample size n = 2040. We report unstandardized coefficients (standard errors in brackets). To obtain the inverted Mills ratio, we first conducted a probit regression to estimate the probability of being treated.

TABLE W8B
Heckman Selection Model (2) IMR Controlled Model

Independent Variables (IV)	Model 1: Moderation Model **Resale Revenue (log)**			Model 2: Moderation Model **New Sale Revenue (log)**		
	(a) With controls Est. (SE)	(b) With main effects Est. (SE)	(c) With moderation effects Est. (SE)	(a) With controls Est. (SE)	(b) With main effects Est. (SE)	(c) With moderation effects Est. (SE)
Treatment Effect of Disruption						
Post-Period Dummy x Rel. Disruption Dummy (DiD)	-.34*** (.07)	-.33*** (07)	-.39*** (.10)	.42*** (.15)	.41*** (.15)	ns
Inverse Mills Ratio	-.67*** (.21)	-.55*** (.20)	-.54*** (.20)	.26* (.16)	ns	ns
Main Effects Relationship Strength						
Financial Benefit		-1.40*** (.29)	-1.59*** (.34)		-.53* (.30)	-.81** (.31)
Functional Benefit		ns	ns		ns	ns
Contractual Bonds		.77*** (.13)	.64*** (.14)		ns	ns
Main Effects Relationship Dynamics						
Complex Growth		ns	.15*** (.04)		ns	.18** (.07)
Product Line Growth		-.42*** (.06)	-.46*** (.07)		.36*** (.08)	.36*** (.09)
Purchase Process Variability		.42** (.16)	.32* (.18)		.79*** (.17)	.94*** (.19)
Moderation Effects Relationship Strength						
Financial Benefit			1.09** (.51)			1.66** (.79)
Functional Benefit			4.63* (2.79)			9.19* (4.92)
Contractual Bonds			1.02*** (.19)			ns
Moderation Effects Relationship Dynamics						
Complex Growth			-.14*** (.05)			-.19*** (.07)
Product Line Growth			.67*** (.10)			ns
Purchase Process Variability			.69** (.30)			-.99** (.42)
Moderation Effects Relationship Management						
Personal Communication Intensity			.31*** (.11)			ns
Cross-Selling Intensity			ns			.48** (.21)
Control Variables						
Relationship Disruption Dummy, Post-Disruption Period, Control Terms and Variables	Included	Included	Included	Included	Included	Included
Constant	8.81*** (.39)	9.98*** (.49)	10.35*** (.52)	4.67*** (.31)	4.44*** (.46)	4.56*** (.48)
R-Squared	.384	.433	.444	.161	.186	.192

ns $p > .10$, *$p < .10$, **$p < .05$, ***$p < .01$ (all based on two-tailed test).

Notes: Sample size n = 2040. We report unstandardized coefficients (robust standard errors in brackets are clustered on individual customers) and use log-transformed dependent variable. We included the inverted Mills ratio from the first-stage Heckman selection correction and repeated the difference-in-differences analysis.

Web Appendix W9
Comparability of Treatment and Control Groups: Propensity Score Matching

Propensity Score Matching	Observations	Hypothesis	Average Treatment Effects (ATE)	
			New Sale Revenue ATE Est. (SE)	**Resale Revenue** ATE Est. (SE)
Main Effect of Relationship Disruption	N=2,040	H1(-), H2(+)	.31** (.15)	-.26** (.13)
Effect of Relationship Disruption at prior 'Firm Level Relationship Strength[1]				
at **Low** Financial Benefit	N=1,228	$H_{3a}(+)$ $H_{4a}(+)$	ns	-.13** (.06)
at **High** Financial Benefit	N=812		.46** (.22)	ns
at **Low** Functional Benefit	N=1,395	$H_{3b}(+)$ $H_{4b}(+)$	ns	ns
at **High** Functional Benefit	N=645		.52* (.29)	.12** (.05)
at **Low** Contractual Bonds	N=1,024	$H_{4c}(+)$	ns	-.22*** (.07)
at **High** Contractual Bonds	N=1,016		ns	ns
Effect of Relationship Disruption at prior 'Firm Level Relationship Dynamics'[1]				
at **Low** Complex Growth	N=1,736	$H_{5a}(-)$ $H_{6a}(-)$	.43** (.17)	-.20* (.11)
at **High** Complex Growth	N=304		ns	-.29** (.12)
at **Low** Product Line Growth	N=1,573	$H_{5b}(-)$ $H_{6b}(+)$	ns	-.16** (.06)
at **High** Product Line Growth	N=467		ns	ns
at **Low** Variability in Purchase Process	N=641	$H_{5c}(-)$ $H_{6c}(+)$	.62** (.25)	-.31** (.12)
at **High** Variability in Purchase Process	N=1,399		ns	ns
Effect of Relationship Disruption at subsequent 'Relationship Management'				
at **Lower** Cross-Selling Intensity	N=1,660	$H_{7a}(+)$	ns	ns
at **Higher** Cross-Selling Intensity	N=1,718		.59*** (.11)	ns
at **Lower** Personal Communication Intensity	N=1,759	$H_{7b}(+)$	ns	-.51*** (.08)
at **Higher** Personal Communication Intensity	N=1,621		ns	ns

ns $p > .10$, *$p < .10$, **$p < .05$, ***$p < .01$ (all based on two-tailed test).

Notes: Average treatment effect by propensity score matching estimator with Probit model, estimated with Stata teffects psmatch (estimated standard error in brackets). We include a prior level of the dependent variable, main effects of our moderators, and all control variables for all propensity score estimations. We drew subgroups for the moderation analysis from a mean split of the respective moderating variable, resulting in subgroups of high and low value. For dummy indicators of salesperson's relationship management, "lower intensity" includes treated customers with lower intensity value, and "higher" includes treated customers with higher intensity value only.

Web Appendix W10
Additional Analysis: Contingent Total Revenue Effect

We illustrate the detailed results of our additional analysis for the contingent effect of a relationship disruption on total revenue. We reran the moderation model to predict the contingent development of total revenue, then applied a Johnson-Neyman technique (Johnson and Neyman 1936; Spiller et al. 2013) to find the range of significance (RoS) within which simple effects of each interaction become significant. The regression results are in Table W10.

Harmful effects on total revenue. A relationship disruption decreases total revenue only if financial benefits prior to the disruption were less than .98, that is, when the focal customer paid 2% higher prices than other customers ($RoS_1^{Lower} < .98$, $b_{JN1}^{L} = –.07$, $p = .05$), the customer's functional benefits had been below 1% ($RoS_2^{Lower} < .01$, $b_{JN2}^{L} = –.07$, $p = .05$), or contractual bonds had been below 36% ($RoS_3^{Lower} < .36$, $b_{JN3}^{L} = –.06$, $p = .05$). Appropriate firm-level relationship strength thus may effectively buffer total revenue losses after disruption. With regard to relationship dynamics, a relationship disruption harms total revenue if complex growth prior to disruption was above .37 ($RoS_4 > .37$, $b_{JN4} = –.07$, $p = .05$) or product line growth was below 1.07 ($RoS_5^{Lower} < .1.07$, $b_{JN4}^{L} = –.07$, $p = .05$). These findings support our findings that high dynamics due to complex growth may harm revenue developments after disruption, but high dynamics from product line growth may prevent total revenue losses. We do not find a significant interaction with the variability of the purchase process, presumably due to countervailing effects on resale and new sale revenue.

Beneficial effects on total revenue. In other conditions, total revenues may benefit from a relationship disruption. The firm enjoys increased total revenues after disruption if financial benefits had been above 1.5, such that the focal customer paid 33.3% lower prices than other customers ($RoS_1^{Upper} > 1.50$, $b_{JN1}^{U} = .36$, $p = .05$), the customer's functional benefits had been

above .16 ($RoS_2^{Upper} > .16$, $b_{JN2}^{U} = .15$, $p = .05$), or contractual bonds were above .80 prior to the disruption ($RoS_3^{Upper} > .80$, $b_{JN3}^{U} = .13$, $p = .05$). That is, if the customer reaped strong relational benefits prior to disruption or if strong contractual bonds tie the business, a relationship disruption may benefit total revenue developments. With regard to relationship dynamics, the firm enjoys increased total revenue after disruption as long as product line growth was above 2.35 prior to a relationship disruption ($RoS_5^{Upper} > 2.35$, $b_{JN5}^{U} = .19$, $p = .05$). Finally, the incoming salesperson's relationship management affects total revenue after disruption. In our sample, a higher cross-selling intensity of the incoming salesperson effectively reduces total revenue losses from 24.6% to just 6.2% (b = .16, $p < .05$), and higher personal communication intensity can even increase total revenue after a disruption by 4% (b = .26, $p < .05$).

Johnson, Palmer O. and Jerzy Neyman (1936), "Tests of Certain Linear Hypotheses and Their Application to Some Educational Problems," *Statistical Research Memoirs*, 1, 57–93.

Spiller, Stephen A., Gavan J. Fitzsimons, John G. Lynch Jr., and Gary H. McClelland (2013), "Spotlights, Floodlights, and the Magic Number Zero: Simple Effects Tests in Moderated Regression," *Journal of Marketing Research*, 50 (2), 277-288.

TABLE W10
Moderating Impact of Relationship Disruption on Total Revenue

Independent Variables (IV)	**Total Revenue Moderation Model** Total Revenue (log)			
	(a) With Main Effects Est. (SE)	(b) With moderation Effects I Est. (SE)	(c) With moderation Effects II Est. (SE)	(d) With moderation Effects III Est. (SE)
Treatment Effect of Disruption				
Post-Period Dummy x Rel. Disruption Dummy (DiD)	-.08*** (.03)	ns	-.04 (.03)	-.22*** (.08)
Main Effects of Firm Level Relationship Strength				
Financial Benefit	-1.01*** (.23)	-1.16*** (.26)	-1.15*** (.26)	-1.14*** (.26)
Functional Benefit	ns	ns	ns	ns
Contractual Bonds	1.14*** (.09)	1.08*** (.10)	1.08*** (.10)	1.07*** (.10)
Main Effects of Firm Level Relationship Dynamics				
Complex Growth	ns	ns	.12*** (.03)	.12*** (.03)
Product Line Growth	ns	ns	-.06* (.03)	-.06* (.03)
Purchase Process Variability	.76*** (.13)	.77*** (.13)	.73*** (.14)	.73*** (.14)
Moderation Effects of Firm Level Relationship Strength				
Financial Benefit		.82** (.38)	.83*** (.38)	.80** (.38)
Functional Benefit		6.13*** (2.20)	6.17*** (2.20)	6.34*** (2.16)
Contractual Bonds		.42*** (.15)	.45*** (.15)	.51*** (.15)
Moderation Effects of Firm Level Relationship Dynamics				
Complex Growth			-.11*** (.04)	-.11*** (.04)
Product Line Growth			.20** (.08)	.21*** (.07)
Purchase Process Variability			ns	ns
Moderation Effects of Salesperson Relationship Management				
Cross-Selling Intensity				.16* (.09)
Personal Communication Intensity				.26*** (.10)
Control Variables				
Relationship Disruption Dummy, Post-Disruption Period, Control Terms and Variables	Included	Included	Included	Included
Constant	8.52*** (.30)	8.71*** (.32)	8.74*** (.33)	8.73*** (.33)
R-Squared	.513	.516	.517	.518

ns $p > .10$, *$p < .10$, **$p < .05$, ***$p < .01$ (all based on two-tailed test).
Notes: Sample size n = 2040. We report unstandardized coefficients (robust standard errors in brackets are clustered on individual customers) and use the log-transformed dependent variable.

Web Appendix W11
Supplemental Information on Research Context

The B2B logistics company that informs this study offers a broad portfolio of services, along the customer ‘s value chain, including warehousing and logistics of raw material, products, and goods (supplier logistics), internal logistic automation and outsourcing (production logistics, commissioning for assembling), warehousing and distribution of finished products, retail logistics and various supplemental services (tracking systems, digital information transport, process optimization).

Complex vs. simple. The company distinguishes its offerings as simple or complex to sell. Complex products require close, often continuous coordination between the salesperson and the customer (during and after the sales process), such as to ensure timely, secure cargo delivery and warehousing. For instance, complex services include the transport and warehousing of hazardous (e.g., chemical materials), high value, or demanding (e.g., cool chain logistics, bulky and heavy) goods. Such services are not necessarily customized to specific customer needs, because standard procedures can apply, even if continuous information flows are needed. For example, various IT services are complex in nature but not customized (e.g., secure data transfers, IT consulting seminars).

Customized vs. standardized. The company tracks whether offerings are customized for individual customers or sold in standard compositions. Customizing products to fit individual customer’s needs likely provides additional value to the customer (e.g., aligning interfaces can decrease coordination effort and increase logistical efficiency). In addition, customized solutions are often individually priced and negotiated. Because customers likely pay higher prices for customized solutions than standard ones, they should receive or at least anticipate additional value, in the form of functional benefits. Accordingly, some customized offerings still can be

simple to sell, requiring only minimal coordination between the customer and salesperson (e.g., customized courier services for international and overnight transports). Other customized offerings require intense, continuous coordination among the relational partners (e.g., outsourcing entire logistics operation) and thus are more complex to sell.