

# As they sow, so shall they reap: customers' influence on customer satisfaction at the customer interface

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**Abstract** Extant research provides valuable knowledge about how firms can satisfy their customers. However, it is unclear how customers themselves contribute to their satisfaction. From a basis in the job demands–resources model, the authors propose a customer demands–resources model. In this model, customer demands (negative customer behaviors) and customer resources (positive customer behaviors) affect customer satisfaction through frontline employees' customer-oriented attitudes and customer-oriented behaviors. Using dyadic data from 141 frontline employees and 375 customers, this study identifies customer behaviors as an important source of customer satisfaction. Customer demands impede frontline employees' customer-oriented attitudes and customer satisfaction through frontline employees' emotional exhaustion, whereas customer resources indirectly increase customer satisfaction. Customer resources also buffer the negative effect of customer demands on frontline employees' customer-oriented attitudes.

**Keywords** Customer demands–resources model · Support by customers · Customer satisfaction · Customer-oriented attitude · Customer-oriented behavior

Practitioners and researchers alike agree that satisfied customers are the key to competitive advantage and sustained market success (Anderson and Sullivan 1993; Luo and Homburg 2007). Thus, companies invest considerable resources into programs to increase customer satisfaction by increasing product quality (Fornell et al. 1996; Maruca 2000), developing product innovations (Lake and Lunde 2008; Magidson and Brandyberry 2001), or improving customer interactions (Hennig-Thurau 2004; Heskett et al. 2008; Homburg and Stock 2004). Surprisingly though, customers themselves rarely

have been considered as sources of their satisfaction, despite Bitner et al.'s (1994) proposal, nearly 20 years ago, that customers influence their own satisfaction through their inappropriate behaviors or unreasonable demands.

Frontline employees, as the primary representatives of the company's customer interface, frequently encounter inappropriate and demanding customer behaviors (Gettman and Gelfand 2007; Zablah et al. 2012a), in that “even though customers can choose from a variety of channels to voice their concerns, complaints are still made predominately in person to contact employees” (Gruber 2011, p. 89). Accordingly, we propose that understanding how customer behaviors affect customer satisfaction requires a preliminary understanding of how customers' behaviors affect frontline employees.

Research that considers customers' roles at the customer interface adopts either a positive or negative perspective. In the past decade, increased attention has centered on the “dark side” of customer behaviors (Grandey et al. 2004; Reynolds and Harris 2006). Related studies are mostly rooted in industrial psychology or marketing (e.g., sales management, services marketing) and investigate demanding customer behaviors during interactions with frontline employees, such as verbal abuse and aggression, incivility, or revenge behaviors (e.g., Grandey et al. 2004, 2007; Grégoire et al. 2010; Sliter et al. 2010). Overall, these studies affirm that demanding customer behaviors harm frontline employees' well-being, as measured by their exhaustion, injury, and job satisfaction (Chan et al. 2010; Chowdhury and Endres 2010; Grandey et al. 2004). Other studies highlight instead that customers might serve as valuable resources, stimulating frontline employees' well-being and goal achievement. A few recent studies rooted in marketing and psychology identify customers as sources of emotional support, such that they contribute to frontline employees' well-being through their supportive behaviors (Yoon et al. 2004; Zimmermann et al. 2011). Service marketing and service innovation research, especially that pertaining to the service-dominant logic, also reveals that customers can stimulate service delivery and new product

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development by providing valuable information (Auh et al. 2007; Flint 2006; Vargo and Lusch 2004, 2008). From this perspective, customers provide cognitive support in the form of valuable information and feedback about joint goals (Fang 2008; Payne et al. 2008; Wu 2011).

Previous studies grant valuable insights into customers' demanding and supportive behaviors, but knowledge of how these behaviors extend to customer satisfaction at the customer interface is scarce. Furthermore, no previous study has investigated both demanding and supportive behaviors simultaneously to determine whether and how customers' behavior might affect customer satisfaction. Using dyadic survey data from 141 frontline employees and 375 customers, this study addresses such questions and thereby contributes to extant literature in several respects.

First, we extend knowledge on the antecedents of customer satisfaction, beyond the firm's internal factors, such as product or service quality. Specifically, we highlight customers as a source of their own satisfaction and emphasize the interaction as a driver of customer satisfaction. Second, we propose and empirically test a customer demands–resources model to explore the underlying mechanisms by which customers affect their satisfaction. The model features a causal chain, running from customer demands and resources to customer satisfaction, through the mediating constructs of emotional exhaustion, customer-oriented attitudes, and behaviors. Conceptually, this model is inspired by the job demands–resources model (Bakker et al. 2005; Demerouti et al. 2001), rooted and established in industrial psychology. By integrating psychological and marketing-related variables, we extend the existing theoretical base beyond the context of healthcare management. Third, we distinguish between customer demands (i.e., the extent to which frontline employees encounter customers expressing negative behaviors) and resources (i.e., the extent to which frontline employees perceive their customers as supportive of personal or work-related goals) to explain customers' influence on customer satisfaction. To the best of our knowledge, this study is the first to investigate customer demands and resources simultaneously. By enhancing the importance of supportive customers and confirming the diminishing effect of negative customer behaviors, we link two established research streams, on customer stressors and on customers as resources. This comprehensive perspective avoids a unilateral treatment of customers as stressors or as resources, as is common in extant literature. Fourth, we investigate how the interplay of customer demands and resources affects customer satisfaction, including interaction effects. In other words, we strive to determine whether customer resources can buffer the detrimental effects of customer demands, as proposed by recent research in the context of general job demands and resources (Bakker et al. 2005; Crawford et al. 2010).

The findings of this study are also relevant from a managerial perspective. Marketing managers should consider this

largely neglected source of customer satisfaction, focusing not only on internal and obviously controllable sources of customer satisfaction (e.g., product and service quality) but also on customers' influence. Furthermore, this study offers marketing managers insights into how customer demands and resources interact. On the basis of these findings, we offer suggestions for managing certain customer behaviors at the customer interface to achieve greater customer satisfaction.

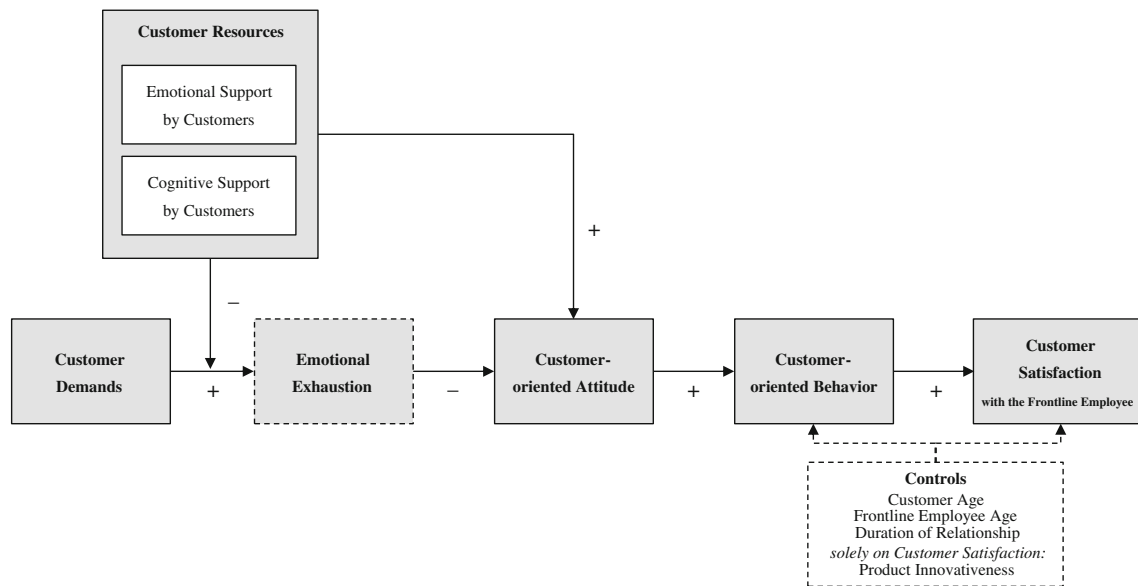
## Conceptual background

### Customer demands–resources model

In Fig. 1 we present the customer demands–resources (CD-R) model. Our unit of analysis is a specific frontline employee in a business-to-consumer setting and the group of customers for whom this frontline employee is responsible. The CD-R model examines the mechanism by which the customers influence customer satisfaction through their interactions with frontline employees.

This framework is inspired by the job demands–resources (JD-R) model, which is well established in industrial and organizational psychology (Bakker et al. 2005; Demerouti et al. 2001). The JD-R model suggests a causal chain, running from job demands and job resources to job outcomes, mediated by an employee's psychological state (Crawford et al. 2010; Sonnentag et al. 2010). Job demands encompass physical, social, and organizational aspects, such as workload or time pressure, and require sustained mental effort by employees (Demerouti et al. 2001). They negatively affect an employee's state by creating psychological strain (van der Doef and Maes 1999) that harms performance (Babakus et al. 2009; Bakker et al. 2004; Dwyer and Fox 2006). In contrast, job resources are the “physical, psychological, social, or organizational aspects of the job that may do any of the following: (a) be functional in achieving work goals; (b) reduce job demands at the associated physiological and psychological costs; (c) stimulate personal growth and development” (Demerouti et al. 2001, p. 501). Those resources, such as work-related social support or autonomy, enhance an employee's state (Bakker et al. 2005; Crawford et al. 2010), which improves his or her performance.

Although the JD-R model provides valuable insights about the positive and negative facets of the job-related environment as antecedents of frontline employees' state, it does not focus on external stakeholders, such as customers. Consequently, the underlying mechanisms by which customers affect frontline employees and/or customer satisfaction remain unexplored. Interactions with customers are fundamental to frontline employees' jobs (Dormann and Zapf 2004; Yagil et al. 2008), so the CD-R model captures the basic idea of the JD-R model and integrates customers' behaviors as



**Fig. 1** Conceptual framework

demands and resources. We thus suggest a new causal chain, running from customer demands and customer resources to customer satisfaction, mediated by frontline employees' psychological state and behavior.

To represent customer satisfaction, we use *satisfaction with the frontline employee*, which we define as the customer's evaluation of her or his interaction with a frontline employee. *Customer demands* are the extent to which frontline employees encounter customers expressing negative behaviors. Customer demands occur at the customer interface and include behaviors such as hostility and complaining about frontline employees. We further integrate *customer resources*, or the extent to which frontline employees perceive their customers as supportive of personal or work-related goals. Customers can provide emotional support during interactions with frontline employees, such as by valuing frontline employees' work effort (Zimmermann et al. 2011). Drawing on these and other emotional inputs, frontline employees gain energy, which can influence their emotional state or achievement of personal goals (Hobfoll 1989; Yoon et al. 2004).

Furthermore, as is known from literature on the service-dominant logic or customer participation, customers also can serve as important resources by providing valuable feedback and information (Auh et al. 2007; Hsieh et al. 2004; Vargo and Lusch 2004, 2008). By introducing knowledge, precisely describing wishes, or providing possibilities for improvement, customers enable frontline employees to deliver better services and facilitate their work-related goal achievement (Payne et al. 2008). We accordingly distinguish emotional and cognitive customer resources as antecedents of a frontline employee's state (see Fig. 1).

Frontline employees face both demanding and supportive customers, so this study also investigates how demands and

resources interact. Regarding more general job demands, the JD-R model predicts that the detrimental effects of job demands are buffered by job resources (e.g., Bakker et al. 2005; Dwyer and Fox 2006; van Yperen and Hagedoorn 2003). In turn, we predict that customer resources buffer the negative effect of customer demands on a frontline employee's state (see Fig. 1).

According to the JD-R model, the effect of general job demands and resources on job outcomes is mediated by the employee's state. Often this state is represented by emotional exhaustion, or the "feeling that the individual's emotional tank is empty and ... a lack of energy" (Babakus et al. 1999, p. 58). Because the CD-R model focuses on the relationship between frontline employees and customers, and we are interested in frontline employees' affective responses to customer-related demands and resources, we also represent frontline employees' state by their customer-oriented attitude, influenced by the extent to which they feel emotional exhaustion.

Recent research encourages discussions of the customer orientation conceptualization. Customer orientation might be conceptualized as behavior (Saxe and Weitz 1982; see also Bettencourt and Brown 2003; Kelly 1992), a psychological variable (Donavan et al. 2004; Grizzle et al. 2009), or a combination of customer-oriented attitude and customer-oriented behavior that appear as coexisting, independent constructs (see Kennedy et al. 2002; Stock and Hoyer 2005; Susskind et al. 2003). A recent meta-analysis describes customer orientation as "a work value that captures the extent to which employees' job perceptions, attitudes, and behaviors are guided by an enduring belief in the importance of customer satisfaction" (Zablah et al. 2012a, p. 24). Thus customer orientation—as a global, trait-like belief in the importance of customers that is independent of the person's job or situation—represents a precondition for customer-oriented attitude and behaviors (Zablah et al. 2012a).

In addition, customer-oriented attitude and behavior, as work-related variables, might be affected by situational factors and other values.

Appropriately, we represent frontline employees' customer-related state in terms of their customer-oriented attitude. According to Grizzle et al. (2009) and Stock and Hoyer (2005), a *customer-oriented attitude* is a state that reflects frontline employees' affect toward their customers. Searching for the link between customer-oriented attitudes and customer satisfaction in extant marketing research (Blocker et al. 2011; Homburg et al. 2011; Stock and Hoyer 2005), we consider frontline employees' customer-oriented behavior as another mediating variable in the CD-R model. *Customer-oriented behavior* encompasses frontline employees' behaviors aimed at identifying customers' interests and goals and helping customers satisfy their needs (Homburg et al. 2011; Saxe and Weitz 1982). Accordingly, the CD-R model incorporates customer-oriented attitude and the resultant customer-oriented behavior as mediating variables, which transform customer demands and resources into customer satisfaction (see Fig. 1).

## Hypotheses

*Main effects* Using the framework in Fig. 1, we start by predicting the effects of customer demands and customer resources on customer satisfaction, through the mediating constructs of emotional exhaustion, customer-oriented attitude, and behavior. The JD-R model offers a basic idea of how customer demands might affect frontline employees' customer-oriented attitudes. We adapt this idea and propose that customers' negative influence on frontline employees' customer-oriented attitudes is mediated by frontline employees' emotional exhaustion.

Most studies of the JD-R model represent employees' mental state by their emotional exhaustion. General job demands increase emotional exhaustion (Bakker et al. 2005; Demerouti et al. 2001): dealing with job demands is associated with mental effort, so employees lose emotional energy, which means becoming emotionally exhausted (Demerouti et al. 2001; Schaufeli and Bakker 2004). Other than these general job demands, contact with other persons is an important job condition that predicts negative mental states (LeBlanc and Kelloway 2002; Leiter and Maslach 1988). Whereas research originally focused on contacts with supervisors and colleagues, recent research has included frontline employees' contacts with customers as a central working condition (Dormann and Zapf 2004; Yagil et al. 2008). Consequently, dealing with customer demands requires mental effort from frontline employees and thus increases their emotional exhaustion (Grandey et al. 2005; Maslach 1982).

Emotional exhaustion in turn negatively affects employees' attitudes toward their jobs, including job satisfaction (Babakus et al. 1999) and organizational commitment (Cropanzano et al. 2003). Thus, we propose that frontline employees' customer-oriented attitudes depend on the extent of their emotional exhaustion and predict:

H1: Customer demands negatively affect a frontline employee's customer-oriented attitude, through the mediating construct of emotional exhaustion.

Customers might provide emotional backing, facilitate goal achievement (Zimmermann et al. 2011), or offer valuable professional information (Hoyer et al. 2010; Vargo and Lusch 2004). We accordingly distinguish between emotional and cognitive resources (Cutrona and Russell 1990): *emotional support by customers* refers to the extent to which frontline employees perceive interactions with their customers as a source of emotional energy and personal development; *cognitive support by customers* instead refers to the extent to which frontline employees perceive their customers' professional feedback and information as valuable.

Again, the JD-R model provides valuable insights. Early studies included only emotional exhaustion and disengagement to represent frontline employees' state (Demerouti et al. 2001), but recent views of the JD-R model extend it to include engagement as a state (Crawford et al. 2010; Nahrgang et al. 2011; Schaufeli and Bakker 2004). Job resources positively affect engagement, defined as a "positive, fulfilling, work-related state of mind" (Schaufeli and Bakker 2004, p. 295). As customers represent a central element of frontline employees' work (Dormann and Zapf 2004; Yagil et al. 2008), frontline employees' customer-oriented attitudes represent a part of overall engagement, i.e., a positive customer-related state of mind.

Customers can provide emotional support that satisfies frontline employees' need for courtesy and respect during interpersonal interactions (Luo 2007). Customers also provide valuable information and feedback, which enable frontline employees to fulfill their job tasks better (Payne et al. 2008; Vargo and Lusch 2004, 2008). Because customers are essential enablers for frontline service provision, they should help satisfy foundational needs for competence and relatedness (Deci and Ryan 1985), as well as the achievement of work-related goals (Zimmermann et al. 2011). In other words, the reaction of frontline employees to customers' support should be positive, leading to a positive, customer-related state of mind. Thus,

H2: (a) Emotional and (b) cognitive support by customers positively affect a frontline employee's customer-oriented attitude.

Social psychology research offers a clear description of the relationship between attitudes and behaviors (Ajzen and Fishbein 1980; Homer and Kahle 1988). Consistent with this well-established literature, we anticipate that customer-



oriented attitudes and related state-like variables predict customer-oriented behavior (Bettencourt and Brown 2003; Grizzle et al. 2009; Stock and Hoyer 2005). Thus,

H3: A frontline employee's customer-oriented attitude positively affects customers' perceptions of the frontline employee's customer-oriented behavior.

We also propose a positive effect of frontline employees' customer-oriented behavior on customer satisfaction with the frontline employee. Satisfaction with the frontline employee is a component of overall customer satisfaction, so we rely on extant research and predict that customer-oriented behavior is a strong antecedent of customer satisfaction (Blocker et al. 2011; Homburg et al. 2011; Huang 2008; Stock and Hoyer 2005). That is,

H4: Customer-oriented behavior positively affects customer satisfaction with the frontline employee.

*Moderating effects of customer resources* Consistent with the JD-R model, we anticipate that customer resources (i.e., emotional and cognitive support) buffer the negative effect of customer demands on customer-oriented attitudes (Bakker et al. 2005; Dwyer and Fox 2006; van Yperen and Hagedoorn 2003). Emotional support by customers provides frontline employees with more emotional energy to handle customer demands (Fredrickson 2001; Miner et al. 2012); cognitive support by customers increases frontline employees' repertoire for dealing with customer requirements (Auh et al. 2007; Chan et al. 2010). When frontline employees can draw on such resources, they have to invest less emotional energy and mental effort into their interactions with customers. Thus, emotional exhaustion should be lower for frontline employees who receive support from customers, which in turn should mitigate any changes in frontline employees' customer-oriented attitudes. That is,

H5: (a) Emotional and (b) cognitive support by customers weakens the negative effect of customer demands on a frontline employee's customer-oriented attitude, mediated by the frontline employee's emotional exhaustion.

## Methodology

### Data collection and sample

With this study, we seek to determine the consequences of customer behaviors at the general customer interface, so we collected dyadic data from frontline employees and customers in different business-to-consumer industries. During the multistep data collection, we used two questionnaires: With one,

we measured frontline employees' perceptions of the group of customers for whom they are responsible. With the other, we measured customers' perceptions of their satisfaction and of specific frontline employees' behaviors. Because our goal was to obtain customers' evaluations of frontline employees' behaviors shortly after their interactions, we visited frontline employees at their workplaces and relied on hard-copy questionnaires.

First, we chose 20 towns as sites for our data collection. With the help of a commercial directory, we randomly identified 15 companies per town whose employees personally and regularly interacted with customers. In unannounced visits to their workplaces, we then contacted 300 employees and asked them to join the study, without providing any incentives. To prevent any performance bias, such that better performing employees might be more willing to answer our questions, we explicitly stated that the results would not be shared with the employing firms. Rather, we assured all participants that their responses would be used exclusively for research purposes. In addition, we told them only that we sought to survey their customers after they had completed the questionnaire. The frontline employees evaluated customers with whom they came in contact, not interactions of customers with their colleagues. We gathered 165 questionnaires (response rate=55.0%), 150 of which were complete.

Second, outside each location, we solicited responses from three consecutive customers who interacted with these employees. We asked them to evaluate the frontline employees' behaviors in their previous interaction. Of the 495 identified customers, 428 returned questionnaires, for a response rate of 86.5%, and 388 customer responses referred to one of the 150 employees who had completed questionnaires.

Third, we matched the data at the frontline employee level by computing the mean of all customers per employee. We eliminated nine employee (and 13 related customer) questionnaires because some customer responses were not complete. We also calculated the index of within-group interrelated reliability ( $r_{wg}$ ) to assess agreement among the customers' judgments (James et al. 1984). The measures of both frontline employees' customer-oriented behavior and customer satisfaction with the frontline employee provided median  $r_{wg}$  values greater than .70 (.96 for customer-oriented behavior, .95 for customer satisfaction with the frontline employee; Burke et al. 1999).

Thus, our data collection procedure generated 141 dyads of frontline employees and average information provided by their customers. In our final sample, 50.4% of the employee respondents and 56.3% of the customer respondents were women. The sample represented the following industries: retailing (32.1%); gastronomy, hotel, and tourism (30.0%); crafts and coiffeur (21.4%); automobile (9.3%); and financial services (7.2%). Detailed information about the dataset appears in Table 1.

**Table 1** Sample description

Industries		
Retail industry	32.1%	
Gastronomy, hotel, and tourism industry	30.0%	
Trade and coiffeur	21.4%	
Automobile	9.3%	
Financial services industry	7.2%	
Gender		
	Employee	Customer
Female	50.4%	56.3%
Male	49.6%	43.7%
Age		
	Employee	Customer
<25 years	17.0%	14.4%
25–34 years	27.0%	22.3%
35–44 years	18.4%	18.8%
45–54 years	23.4%	20.5%
55–64 years	13.5%	12.0%
>64 years	0.7%	12.0%
Duration of relationship		
<1 year	5.8%	
1–5 years	46.7%	
6–10 years	21.3%	
11–20 years	16.3%	
>20 years	9.9%	

## Measure development

To design our questionnaire, we relied on existing scales when possible. Detailed information about the questionnaire appears in the [Appendix](#).

**Customer demands** To measure customer demands, or the extent to which frontline employees encountered customers who exhibited negative behaviors, we used an existing scale by Dormann and Zapf (2004) that measures general customer-related stressors across four dimensions. We dropped two dimensions—disproportionate and ambiguous customer expectations—as overly task related and focused instead on the individual-level dimensions: “verbal aggressions by customers as well as customer quarrels and criticisms” and “aversions employees have to customers” (Dormann and Zapf 2004, p. 70). Such behaviors are independent of frontline employees’ tasks and are directed toward frontline employees.

In addition, we asked ten frontline employees to identify representative customer behaviors. To minimize the length of the questionnaire and thus encourage respondents’ motivation (MacKenzie and Podsakoff 2012), we dropped all other items belonging to the scales for these two dimensions. An exploratory factor analysis did not support separating the two dimensions. Ultimately, we measured customer demands with a

combined, four-item scale that appeared in the frontline employee questionnaire, referring to frontline employees’ perceptions of their customers.

**Customer resources** We used several sources of information to generate scales focused on customer resources, in the forms of cognitive and emotional support by customers. We first reviewed prior literature; from general social support research (Cohen and Wills 1985; House 1981), we derived a functional measure of social support to assess the extent to which the interaction with customers provides support. In addition, we gathered scales from customer participation literature to measure customers as cognitive resources in their interactions with frontline employees (Auh et al. 2007; Chan et al. 2010), such that we identified information and feedback provision as important factors to include. Energy provision also emerged as a form of emotional support by customers and social support at the customer interface (Hobfoll 1989; Zimmermann et al. 2011). To develop these items and refine our scales, we asked several academics and frontline employees to check them, to ensure their content validity.

Next, we conducted a quantitative validation of our two scales with 200 frontline employees, using hard-copy and online questionnaires. We received 147 responses, 142 of which were complete. The respondents for this validation study were 60.6% women, and the average age was 37.8 years. An exploratory factor analysis revealed a two-factor solution. One item from the emotional support scale (“The interaction with customers is a personal enrichment for me”) loaded on both factors, so we removed it. Our calculation of the factor loadings, to test for internal consistency, revealed that one item from the cognitive support scale (“My customers support me in delivering my performance”) had a weak factor loading (.62), so we also removed this item. The two scales with three remaining items each provided valid values (see Table 2).

To assess convergent and discriminant validity, we subjected the measurement models of both scales to confirmatory factor analyses (CFA). Specifically, we used chi-square difference statistics to compare the fit of the proposed two-factor structure to a one-factor model (Bollen 1989; Kline 1998). We estimated a two-factor model, with emotional and cognitive support by customers as discrete latent variables. Several fit indices indicated adequate fit with the data (confirmatory fit index [CFI]=.998; Tucker-Lewis index [TLI]=.997; square root mean residual [SRMR]=.03; root mean square error of approximation [RMSEA]=.03). The fit of the two-factor structure was significantly better than that of a one-factor structure ( $\Delta\chi^2[1]=88.04, p < .01$ ).

To test further for discriminant validity, we applied Fornell and Larcker’s (1981) criterion. Again, the values exceeded the recommended values. The correlation between the constructs ( $r = .61, p < .01$ ) was lower than the square root of the average

**Table 2** Items and psychometric properties of measure (Validation study)

Items	Mean	SD	ITTC	FL	$\alpha$	CR	AVE
Emotional support by customers	3.88	1.44			.91	.91	.78
The interaction with customers is a personal enrichment for me.	–	–	–	–			
Through the interaction with customers, I develop myself personally.	4.81	1.51	.74	.77			
My customers give me emotional support.	3.33	1.50	.84	.91			
The interaction with my customers gives me a lot of emotional energy.	3.49	1.70	.86	.95			
Cognitive support by customers	4.15	1.36			.84	.84	.64
My customers support me in delivering my performance.	–	–	–	–			
My customers give me valuable professional feedback.	3.97	1.65	.66	.73			
The interaction with customers is a professional enrichment for me.	4.38	1.44	.73	.84			
My customers give me valuable information.	4.11	1.59	.72	.83			

$n=142$ , *SD* standard deviation, *ITTC* item-to-total correlation, *FL* factor loadings,  $\alpha$  Cronbach's alpha, *CR* composite reliability, *AVE* average variance extracted

7-point Likert-type scale with “strongly agree” and “strongly disagree” as anchors was employed

variance extracted of the constructs (see Table 2), in support of discriminant validity.

*Emotional exhaustion* To measure emotional exhaustion, we used an existing scale by Maslach and Jackson (1981). It was originally used to measure emotional exhaustion as a key dimension of employee burnout (Cordes and Dougherty 1993; Cropanzano et al. 2003). The items related to emotional exhaustion appeared in the frontline employee questionnaire.

*Customer orientation and customer satisfaction with the frontline employee* To measure customer-oriented attitude and behavior and customer satisfaction, we adapted existing scales by Stock and Hoyer (2005). The items related to customer-oriented attitude appeared in the frontline employee questionnaire. Frontline employees assessed their own customer-oriented attitude toward customers in general. Because customers' perceptions of customer-oriented behavior influence performance values more than employees' perceptions (Deshpandé et al. 1993), we measured customer-oriented behavior and customer satisfaction from customers' viewpoint. Specifically, we asked customers to assess the customer-oriented behavior of the frontline employee with whom they interacted.

*Control variables* Finally, we included four control variables that might affect customers' perceptions of customer-oriented behavior and satisfaction. Product innovativeness, defined as a company's ability to generate a range of new goods or services, likely influences customer satisfaction (Luo and Bhattacharya 2006; Stock 2010); we measured it with a simplified scale by Ali et al. (1995). The duration of the relationship between customer and employee (Anderson and Weitz 1989) and the ages of both frontline employees and

customers (Schaefer and Pettijohn 2006; Varela-Neira et al. 2010) also may affect customer-related outcomes; they appear as control variables in previous studies of customer-related outcomes (Kidwell et al. 2011).

#### Measure assessment

To verify the reliability and validity of the measures, we first calculated Cronbach's alpha coefficients and eliminated single items where necessary. An exploratory factor analysis confirmed that all construct items loaded on only one factor; a CFA of each construct tested their validity. As Table 3 reveals, all the alpha values were greater than .70. The average variance extracted and composite reliability results also showed no values below .50 or .60, respectively. Using Nunnally's (1978) and Bagozzi and Yi's (1988) standards, we thus confirmed satisfactory reliability and validity for all constructs. The variables also met Fornell and Larcker's (1981) criterion for discriminant validity. In Table 3 we provide the square roots of the average variance extracted of each construct; they are greater than all the values in the related columns.

To support our use of structural equation modeling, we tested the fit of our measurement model with the data. The model that included all latent variables achieved a very good fit ( $\chi^2[322, n=141]=482.19$ ; CFI=.94; TLI=.93; RMSEA=.06, SRMR=.06). However, because the two groups—frontline employees and customers—might have sought to demonstrate consistency, the relationship between the variables within each group might be biased (Johns 1994; Podsakoff et al. 2003). To test for common method bias, we conducted Harman's single-factor test (Podsakoff et al. 2003), running a CFA with all items of our model loading on one factor ( $\chi^2[350, n=141]=2044.518$ ; CFI=.35; TLI=.29; RMSEA=.19; SRMR=.20). The very poor fit of this model indicated no concerns of common method bias

**Table 3** Correlations and psychometric properties of measure (Main study)

Variables	Mean	SD	$\alpha$	CR	AVE	1	2	3	4	5	6	7	8	9	10
1. Customer demands	4.09	.90	.90	.90	.70	(.84)									
2. Emotional exhaustion	3.37	.98	.88	.88	.66	.57***	(.81)								
3. Cognitive support by customers	2.43	.89	.82	.82	.60	.07	.03	(.78)							
4. Emotional support by customers	2.75	1.01	.83	.83	.63	-.02	-.11	.58***	(.79)						
5. Customer-oriented attitude	1.53	.62	.75	.76	.51	-.13	-.18**	.43***	.43***	(.72)					
6. Customer-oriented behavior	1.79	.59	.92	.92	.69	-.26***	-.11	.09	.12	.29***	(.83)				
7. Customer satisfaction wFE	1.56	.57	.94	.94	.84	-.24***	-.08	.16	.17***	.29***	.72***	(.92)			
8. Product innovativeness	2.33	.98	.86	.86	.68	.23***	.10	.24***	.22***	.15*	.14*	.16	(.82)		
9. Customer age	43.61	13.65	-	-	-	-.04	.02	.01	-.01	.07	-.27***	-.17**	.03	-	
10. Frontline employee age	39.25	13.02	-	-	-	.22**	.10	-.04	-.28***	-.04	-.11	-.10	.09	.24***	-
11. Duration of relationship	9.26	8.10	-	-	-	.12	.00	-.07	-.12	-.07	-.33***	-.24***	-.04	.52***	.31***

*n* = 141; wFE with frontline employee, SD standard deviation,  $\alpha$  Cronbach's alpha, CR composite reliability, AVE average variance extracted

\*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

Diagonal elements in parentheses are square roots of average variance extracted for constructs measured reflectively with multiple items

(Podsakoff et al. 2003). In addition, we defined a common method factor in our basic structural equation model (without moderating effects but with control variables). All the items in our model loaded on this factor, so we ensured convergence by letting all items load equally on the common method factor (Podsakoff et al. 2003). The poor fit of the first single-factor model and the stability of all main effects in the second model strongly indicated that our results were not biased by the data source (Podsakoff et al. 2003).

Additional data collection<sup>1</sup>

To strengthen our confidence in the scales used on the front-line employee side of the dyad, we collected additional data after our main analyses. To ensure the stability of our results across single- and multi-industry contexts, we collected two datasets. The psychometric measurement properties for both studies can be found in Table 4.

First, we followed a multi-industry approach. We randomly identified frontline employees (Brady et al. 2012; Groth et al. 2009) and asked them to join our study and share the questionnaire or the link to our online survey with other frontline employees. We gathered 107 complete responses, and 57.5% of the respondents were women. The average age was 35.7 years. The sample represented the following industries: retailing (24.0%); individual services (18.3%); gastronomy, hotel, and tourism (15.4%); logistics and transportation (12.5%); education (8.7%); automobile and electronics (7.7%); IT services (6.7%); and financial services (6.7%).

Second, we followed a single-industry approach and cooperated with a medium-sized bank with about 800 employees. We asked the 425 frontline employees to participate in our online survey and received 303 completed questionnaires (response rate=71.3%), likely because together with the CEO, we assured all employees that the data were being collected for research purposes and that only aggregated results would be reported on a subsidiary level. In the final sample, 53.7% of the respondents were women, and the average age was 40.6 years.

In both these additional studies, the analyses of our four major constructs, including exploratory factor analyses, discriminant validity, and correlations, indicated strong justification for the measures and support for the results of our main study.

**Results**

We employed structural equation modeling using Mplus 5.2 (Muthén and Muthén 2007) to test our hypotheses with maximum likelihood parameter estimation. The fit of the study's structural basic model—including control variables but

<sup>1</sup> We thank an anonymous reviewer for suggesting this additional data collection to affirm the industry approach and item refinements.



**Table 4** Psychometric properties of measure (Additional studies)

Variables	Mean	SD	$\alpha$	CR	AVE
Study 1 (Multiple industries; $n=107$ )					
Customer demands	4.21	.92	.92	.92	.74
Emotional exhaustion	2.56	.89	.87	.88	.65
Cognitive support by customers	3.27	.73	.75	.75	.51
Emotional support by customers	3.05	.81	.75	.76	.51
Customer-oriented attitude	4.18	.69	.78	.79	.56
Study 2 (Banking sector; $n=303$ )					
Customer demands	4.42	.63	.83	.84	.59
Emotional exhaustion	2.33	.86	.90	.90	.70
Cognitive support by customers	3.18	.78	.75	.76	.52
Emotional support by customers	3.31	.76	.73	.76	.53
Customer-oriented attitude	4.62	.47	.75	.76	.53

SD standard deviation;  $\alpha$  Cronbach’s alpha, CR composite reliability, AVE average variance extracted

excluding any interaction term—with the data was acceptable. The ratio of the chi-square (605.64) to the degrees of freedom (403) was 1.50, which indicated a good fit of the model (Baumgartner and Homburg 1996). The SRMR (.08) indicated only satisfactory fit, but other values confirmed the good fit of the model (CFI=.92; TLI=.91; RMSEA=.06). We depict the results of the hypothesis tests in Fig. 2.

**Main effects of the CD-R model**

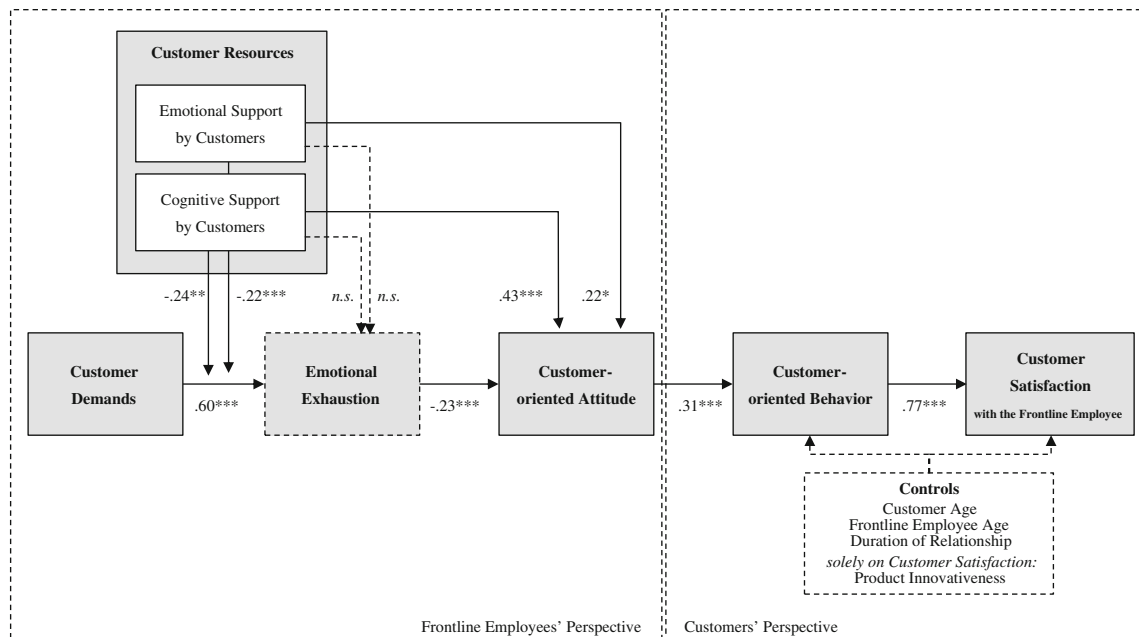
As we predicted in H1, customer demands negatively affected frontline employees’ customer-oriented attitude through the

mediating construct of emotional exhaustion: customer demands increased frontline employees’ emotional exhaustion (.60,  $p < .01$ ), and emotional exhaustion decreased their customer-oriented attitude (-.23,  $p > .01$ ). To test for the mediating effect of emotional exhaustion, we used the bootstrapping method proposed by Zhao et al. (2010) and implemented in Mplus 5.2 (Muthén and Muthén 2007). To determine the significance of the indirect effect of customer demands on frontline employees’ customer-oriented attitudes, we performed 5,000 draws. The 95% confidence interval did not include 0, so the indirect effect was significant.

In H2 we proposed a positive effect of customer resources on a frontline employee’s customer-oriented attitude. Cognitive support by customers (.43,  $p < .01$ ) positively affected customer-oriented attitude. Although the effect of emotional support by customers on customer-oriented attitude was not significant at the 5% level, at the 8% level (.22,  $p < .10$ ), we found a trend in the expected direction. Thus, H2 receives partial support.

As we predicted in H3, customer-oriented attitude positively affected customer-oriented behavior (.31,  $p < .01$ ). This relationship is notable in that this causal link bridges the dyad: customer-oriented attitude was evaluated by frontline employees, but customer-oriented behavior was assessed by customers. Furthermore, customer-oriented behavior positively affects customer satisfaction with the frontline employee (.77,  $p < .01$ ), in support of H4. These combined results reveal that customer demands and customer resources transform into customer satisfaction through frontline employees’ customer-oriented attitude and behavior.

Customer age and the duration of relationship might exert a negative effect on frontline employees’ customer-oriented



Notes: \*  $p < .10$ , \*\*  $p < .05$ , \*\*\*  $p < .01$ .  $\chi^2[403, n = 141] = 605.64$ ; CFI = .92; TLI = .91; RMSEA = .06; SRMR = .08

**Fig. 2** Results of model estimation

behavior: older customers and customers in longer relationships with their frontline employees reported lower evaluations of customer-oriented behavior ( $-.22, p < .05$ ;  $-.21, p < .05$ , respectively). The other control variables showed no significant effects on the output variables.

To verify our prediction that customers' satisfaction with a frontline employee effectively represents overall customer satisfaction, we estimated an additional model in which we supplemented the dependent variables with an overall measure of customer satisfaction (Stock and Hoyer 2005). As expected, the model yielded the hypothesized results. The fit of the measurement model remained good ( $\chi^2[527, n=141]=806.40$ ; CFI=.91; TLI=.90; RMSEA=.06; SRMR=.08); the effects of customer-oriented behavior on customer satisfaction with the frontline employee (.78,  $p < .01$ ) and of customer satisfaction with the frontline employee on customer satisfaction (.71,  $p < .01$ ) were highly significant.

#### Moderating effects of customer resources in the CD-R model

In H5 we predicted a positive moderating effect of customer resources on the negative relationship between customer demands and customer-oriented attitude. To test the two latent interactions, we estimated a separate model for each interaction term. First, we mean-centered the indicators (Algina and Moulder 2001). Second, we created moderating indicators for each model by multiplying the item values of both interacting variables (Marsh et al. 2004). When the number of items for both multiplied constructs was not equal, following Homburg et al. (2010), we used all indicators of both constructs instead of dropping any indicators. Third, we added the moderator variable to our main effects. This procedure enabled us to account for measurement error (Jaccard and Wan 1995) and should lead to better results than we would have obtained from moderated hierarchical regression analysis.

The results reveal the interaction effects of emotional and cognitive support by customers in the proposed direction. The interaction of emotional support by customers ( $-.22, p < .01$ ) and cognitive support by customers ( $-.24, p < .05$ ) buffered the negative effect of customer demands on customer-oriented attitude, mediated by frontline employees' emotional exhaustion. The buffering effect of general job resources thus persisted at the customer interface.

## Discussion

The objective of this research was to explore whether and how customers are responsible for customer satisfaction. We proposed and empirically tested a customer demands–resources model that, to the best of our knowledge, is the first to (1) offer a theoretical mechanism through which customers influence customer satisfaction, (2) integrate and connect both positive

and negative aspects of the customer interface, and (3) identify frontline employees as important mediators of customers' responsibility for their own satisfaction.

#### Academic implications

This research provides new insights into the interface between customers and frontline employees. Previous research on the customer interface rooted in industrial psychology mainly focused on customers as stressors and sources of psychological strain (Demerouti et al. 2001; Grandey et al. 2007). We underscore this assumption, revealing that customer demands decrease frontline employees' customer-oriented attitudes. Yet the conceptualization of customers as a valuable resource for frontline employees has not been addressed sufficiently (Zimmermann et al. 2011). Literature rooted in service marketing provides valuable insights into customers as resources, but mainly from an information or cognitive perspective. We connect and enhance existing literature by integrating the positive and negative aspects of the frontline employee–customer interaction. For this purpose we introduce a two-dimensional conceptualization of customer resources. This approach offers a more comprehensive perspective on the relationship between customers and frontline employees.

Furthermore, we emphasize the importance of the JD-R model, which has attracted somewhat limited attention in marketing research thus far. Our results empirically emphasize that the basic idea of the JD-R model—namely, the direct and moderating effects of job demands and resources—is useful for explaining the impact of environmental factors on employee-related variables, beyond a solely psychological or health context. Thus, we support the notion of using the JD-R model as a theoretical foundation for explaining outcome variables in other contexts, such as innovativeness (Huhtala and Parzefall 2007) or sales performance (Miao and Evans 2013; Zablah et al. 2012b).

Our study also clarifies how frontline employees react to customer behaviors. Supportive customer behaviors foster frontline employees' customer-oriented attitudes and behaviors; negative customer behaviors lead to emotional exhaustion and ultimately have detrimental effects for both frontline employees and the customers themselves. Yet these same customers can help buffer the negative effect of negative customer behaviors on frontline employees' health and customer orientation.

Finally, we confirm that customer-oriented attitude and behavior are mediating variables, in line with existing literature. With our causal chain, we additionally show that customers themselves have an essential effect on frontline employees' customer-oriented attitude and behavior.

#### Managerial implications

Our study provides insights for managers that span both sides of the customer interface, namely support for employees

dealing with customers and techniques to prevent or encourage specific customer behaviors. First, managers should recognize that customers can have negative impacts on frontline employees' customer-oriented attitudes and behaviors, through their inappropriate behavior. This recognition should also spread throughout the corporate culture and challenge the maxim that the customer is king. In particular, frontline employees encountering negative customer behaviors likely experience emotional exhaustion, so their training should include coping strategies (e.g., revaluations of negative signals) and communication techniques to help mitigate negative customer behaviors. Frontline employees also should be trained to identify different customer types. Recognizing the source of negative behaviors and finding ways to satisfy customers' needs will help frontline employees maintain their positive affect toward customers. Furthermore, department-level routines should encourage employees to exchange their knowledge and experiences. Such shared insights should help frontline employees view negative customer behaviors as a team challenge, such that they can work together to cope with negative experiences during their customer interactions while also finding good alternatives for ensuring customer satisfaction.

Second, our findings suggest that supportive customers increase frontline employees' customer-oriented attitude and finally customer satisfaction. Many training methods focus only on negative aspects of customer interactions; we recommend that frontline employees also learn to rely on customers as resources. Managers should emphasize the positive and supportive aspects of customer interactions, such as by sharing positive feedback and important information provided by customers during meetings and feedback processes. Such training can help sensitize employees to positive signals from customers, including praise and suggestions. Managers also might implement a "lesson of the month" or emphasize the innovations and improvements that customers have enabled or encouraged.

Third, managers can implement feedback management systems to encourage customers to provide especially positive commentaries about their interactions with frontline employees. The impact of positive customer feedback on frontline employees also is stronger if provided directly by customers (Grant 2011). Such feedback can emphasize customers' roles as resources and help increase customer orientation. It also might be possible to acknowledge positive customer behaviors by allowing frontline employees to express their thanks for feedback or suggestions for improvements.

Fourth, in contrast with some conventional wisdom, customers are not always right, and frontline employees are not the only ones responsible for customer satisfaction. Managers must find ways to appeal to customers and thereby protect or inspire frontline employees to retain their customer orientation. It may be helpful to improve customers' mental state directly, before they come in contact with frontline employees.

For example, a company might provide helpful information for the interaction or reduce customers' waiting times (Meyer 2001; Taylor 1994). Another managerial goal should be to establish and communicate appropriate expectations. For example, call center managers might ensure that information about expected wait times is accurate, to help prevent customers' anger during their wait. Furthermore, environmental factors, such as furnishings, noise, and artifacts, can influence customers' positive and negative behaviors (Bitner 1992; Hui and Bateson 1991; Reynolds and Harris 2009).

#### Limitations and further research

Our study reveals that customers offer additional predictive factors of customer satisfaction; some of its limitations also suggest directions for further research. In particular, this study is based on dyadic data in a business-to-consumer context. The customer interfaces differ from those in a business-to-business context in several respects, including decision making by multiple persons or supplier and customer teams. Additional research should test our proposed CD-R model in a business-to-business context. It would be particularly interesting to determine if customer demands affect frontline employees' customer-oriented attitudes when they function as a buying center in customer interactions.

The dataset we used features multiple industries, which serves to increase the generalizability of our findings. We tested the validity of our constructs with two additional datasets, and we integrated industry as a control variable in another model; in all cases, the results remained stable. Yet industry-specific parameters might be influential, such as opening hours in the retail sector or self-service technologies in the banking and travel sectors. Therefore, further research should verify our results in specific, relevant industries.

Customer satisfaction was the only performance variable in our study. A more comprehensive framework should include other variables essential to the customer interface, such as loyalty. Objective performance data also might emphasize the impact of customers on company success. Furthermore, by using customer orientation as a mediator, we focused on positive attitudes and behaviors; it also might be interesting to explore whether resources and demands affect frontline employees' negative attitudes and behaviors, including counter-productive work behaviors (Meier and Spector 2013), desires for revenge (Grégoire et al. 2010), or incivility (Van Jaarsveld et al. 2010).

Finally, customer resources buffer the negative effect of customer demands on customer orientation. To help managers mitigate this negative effect, researchers might pursue two paths. First, they should examine different moderators that buffer the detrimental effect of customer demands on customer orientation. For example, frontline employees might react less strongly to negative customer behaviors if the causes are

due to the company, rather than self-induced by the customer. Second, we focused on the customer-related outcomes of customer demands, without providing insights into their sources. Further research might clarify how customer demands arise and how to avoid or attenuate them, before the interaction with the frontline employee even begins.

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## Appendix

**Table 5** Measures and items

Customer demands<sup>b</sup> (Dormann and Zapf 2004).

- How often do you have contact with customers...
- ... who are complaining about you.
- ... who are unpleasant people.
- ... who are hostile people.
- ... who have no sense of humor.

Emotional exhaustion<sup>a</sup> (Maslach and Jackson 1981).

- Please indicate to which extent the following statements apply to your person.
- I feel emotionally drained from my work.
- I feel used up at the end of the workday.
- I feel fatigued when I get up in the morning and have to face another day on the job.
- I feel burned out from my work.

Customer-oriented attitude<sup>a</sup> (Stock and Hoyer 2005).

- Please indicate to which extent the following statements apply to your person.
- I enjoy interacting with customers.
- Customer orientation is one of my personal goals.
- Customer orientation is very important in my job.

Customer-oriented behavior<sup>a</sup> (Stock and Hoyer 2005).

- The salesperson...
- ... tries to get me to discuss my needs.
- ... answers my questions about products and/or services as correctly as they can.
- ... tries to influence me by information rather than by pressure.
- ... tries to give me an accurate expectation of what the product will do for me.
- ... tries to help me achieve my goals.

Customer satisfaction with the frontline employee<sup>a</sup> (inspired by Stock and Hoyer 2005).

- Please indicate to which extent the following statements apply to your person.
- I am very pleased with the salesperson's support.
- On an overall basis, my experience with the salesperson of this company has been positive.
- The contacts with this supplier's salesperson have been very positive.

Product innovativeness<sup>a</sup> (inspired by Ali et al. 1995).

- The following statements relate to the services and products your company is offering to your customers.
- Our products/services are highly innovative.
- Our products/services are frequently supplemented with new features.
- On an overall basis, our offering is highly innovative.

Customer age.

- How old are you? \_\_\_\_\_ years.

Frontline employee age.

- How old are you? \_\_\_\_\_ years.

Duration of relationship.

- How long are you already a customer of this company? \_\_\_\_\_ years.

<sup>a</sup> 5-point Likert-type scale with “strongly agree” and “strongly disagree” as anchors was employed

<sup>b</sup> 5-point scale with “several times an hour”, “several times a day”, “several times a week”, “several times a month”, and “very seldom/never” was employed



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