Customer Participation Stress In Service Encounters: Developing A Customer Participation Demands–Resources Model

By Stephanie Haager*, Marion Büttgen, Zelal Ates, Jan H. Schumann

Prior customer participation research has mostly focused on its positive effects and largely neglected potential negative outcomes. However, customer participation might be stressful and such customer participation stress (CPS) may have negative consequences on customers' perceptions and behavior during the service process. This research extends previous research by investigating the stressors within the actual customer participation process as well as its negative effects.

Based on a critical incident study, the authors develop a comprehensive model of CPS by adjusting the job demands–resources (JD-R) model to the customer participation context. The authors test the model with data from German retail banks' customers (N=522).

The results confirm that customers experience CPS. The adapted JDR model explains this stress, show that participation demands increase and participation resources reduce CPS. In contrast with prior research, we did not find that social support buffers but even enhances the negative effects of participation demands on CPS. Findings moreover reveal that CPS impairs customer participation. Managers can use these findings to improve their customer participation strategies according to CPS and its drivers.

1. Introduction

The participation of customers in services processes has been investigated in service research for decades (Dong & Sivakumar 2017; Oertzen et al. 2018). Prior research has predominantly focused on the benefits of customer participation for service organizations and customers: Both parties gain from improved technical and functional service quality (Kelley et al. 1992), and customer satisfaction increases and service providers enjoy more loyal customers (Halbesleben & Stoutner 2013). The mechanisms behind these effects are well studied. Yet studies have also increasingly revealed potential downsides of customer participation for service providers, such as lower customer satisfaction in the case of service failure (Bendapudi & Leone 2003; Haumann et al. 2015; Heidenreich et al. 2015). Chan et al. (2010) pointed out that customer participation is a double-edged sword and reveal downsides such as job stress and decreasing job satisfaction for employees. Taking the customer perspective, Mende and van Doorn (2015) showed that the workload for customers is increasing due to co-production efforts. Further, Gallan et al. (2013) and Seiders et al. (2015) found that customers do not always participate at an optimal level. These results provide an indication that participation



Stephanie Haager is a self-employed Business Trainer, Systemic Coach and former PhD Candidate at the University of Hohenheim, Institute of Marketing & Management (570B), Schwerzstr. 42, 70599 Stuttgart, E-Mail: hi.stephy@penguin-perspectives.com
*corresponding author



Marion Büttgen is Professor of Corporate Management at University of Hohenheim, Institute of Marketing & Management (570B), Schwerzstraße 42, 70599 Stuttgart, Germany, E-Mail: buettgen@uni-hohenheim.de



Zelal Ates is Professor of Marketing at TH Köln – Cologne University of Technology, Arts and Sciences, Schmalenbach School of Business and Economics, Claudiusstr. 1, 50678 Köln, Germany, E-Mail: zelal.ates@th-koeln.de



Jan Hendrik Schumann is Professor of Marketing and Innovation at University of Passau, Chair of Marketing and Innovation, Innstr. 27, 94032 Passau, E-Mail: jan.schumann@uni-passau.de

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.

for customers is not always an easy or desirable task but an activity that they might perceive as an additional charge—and, consequently, as stress. While companies try to reduce job stress for their employees, the perception of stress by customers is largely neglected. This void is surprising given that studies in employee literature have detailed how strain influences employee performance (Bakker et al. 2004). Hence, stressed "partial employees"—that is, stressed customers—might also not participate at an optimal level, which might reduce the positive aspects research has pointed out so far. A first paper on this phenomenon shows that customers perceive role stress, when participating in service co-development. The negative feelings following customer roles stress in turn reduce customer satisfaction and the perceived value of customer participation (Blut et al. 2020). Blut et al. (2020) reveal that higher levels of customer participation increase customers' role stress.

Our research follows the work on customer role stress by Blut et al. (2020) and extend their work on role stress during service co-development by investigating stressors in the actual customer co-production and its negative effects on customer participation.

In this context, we define customer participation stress (CPS) as a negative psychological state that results from overextension by unavoidable customer participation efforts, such as providing or sharing detailed information and participating in decision-making. Overextension due to participation efforts might especially apply to services that are knowledge-intensive and crucial to customers but that also involve high uncertainty. We revise Demerouti et al.'s (2001) job demands–resources (JD-R) model to propose a customer participation demands–resources (CPD-R) model on the emergence of CPS and its mediating effects on customer participation.

This research follows a two-step approach: First, we use a critical incident technique (CIT) to analyze the relevance of the construct. We thereby identify stressful situations and corresponding services reported by customers who participated in a service encounter. Second, we develop our research model and test it with data from German retail banks' customers.

We make four main contributions. First, investigating CPS expands on current research on the dark side of customer participation (Auh et al. 2007; Blut et al. 2020; Heidenreich et al. 2015). Building on research by Blut et al. (2020) we extend their findings by showing that customer stress does not only lead to negative evaluations, when experienced during service co-development. In this study we show that customers perceive stress during a regularly delivered service experience due to corresponding stressors which impacts customers behavior in a negative way. Second, by developing the CPD-R model, we expand JD-R theory (Bakker & Demerouti 2017; Demerouti et al. 2001) to a new research object, namely customers as partial employees (Halbesleben & Stoutner 2013; Mills & Morris 1986), considering additional service-specific and customer-related model components (drivers and consequences). We thereby provide evidence for further generalizability of the JD-R theory. Third, we contribute to research on the differentiation of demands in challenge and hindrance demands (LePine et al. 2005). Our results reveal that cognitive demands may be likewise challenging and hindering for customers. Further, we uncover a surprising effect that contradicts prior JD-R research—namely, a non-buffering but reinforcing effect of social resources. Fourth, our study contributes to research on frontline employees and customer–employee interactions in services (Frey et al. 2013; Stock & Bednarek 2014). Previous research (Stock & Bednarek 2014) has integrated customers' behavior in the JD-R model as demands and resources for service employees; we capture a change in perspective and focus on interaction-based resources and demands for customers. Our study reveals two customer demands (i.e., cognitive demands and disliking the employee) and shows their effect on CPS and customer participation. Managers can use these findings to improve their customer participation strategies according to CPS and its drivers.

2. Theoretical Background and Hypotheses Development

2.1 Customer Participation

Customer participation is an established yet indistinct concept in marketing, encompassing a broad array of customer behaviors related to the provision of services (Dong & Sivakumar 2017; Oertzen et al. 2018). As pointed out by Dong and Sivakumar (2017) service interactions can generally be described along two dimensions, i.e. the actor and the content of the service exchange.

For this investigation, we draw on well-known definitions by Chan et al. (2010) as well as by Gong et al. (2016) and focus on the actor of the service exchange that is, whether only the customer can perform the activity or whether both, the customer and the firm can perform the activity likewise (Dong & Sivakumar 2017). We define customer participation as a behavioral construct that reflects the extent to which customers show activities—such as providing or sharing information, making suggestions, and participating in decision making—which cannot be performed by the service provider. As pointed out by Dong and Sivakumar (2017) and Bone et al. (2015), because of its important impact on productivity gains, traditional customer participation research has so far focused largely on replaceable customer participation, that is, on customer activities that can also be performed by the service provider. However, a large part of customer activities—especially in knowledge-intensive services, for example, providing information about customer needs and problems—cannot be replaced. Therefore, in this study, we focus on mandatory customer participation.

2.2 Customer Participation Stress

Different notions of stress have been investigated in different service settings (i.e., role stress, job stress, shopping stress,

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.

chronic/acute stress, technostress). According to LePine et al. (2004), stress is a person's reaction to a threatening situation that "taxes or exceeds the individual's capacity or resources." The majority of the literature dealing with stress in service settings has focused on the employee. In particular, it has focused on employee stress due to the work environment (Chiang et al. 2010; Hsieh et al. 2004) and participating customers (Chan et al. 2010), role conflicts, and ambiguity (Arnold et al. 2009) or on technologies employees need to use on a regular basis (Tarafdar et al. 2014).

Focusing on customers, service research has mainly acknowledged customer stress in terms of shopping stress (Albrecht et al. 2017), acute and chronic life stress (Moschis 2007), and stressful life events (Mathur et al. 2008). Research on shopping stress has considered stress as a person–environment relationship in which the environment (e.g., a retail store) contains stressors or is in any way threatening (Albrecht et al. 2017; Baker & Wakefield 2012). Furthermore, some research has considered stressful life events that effect customers' consumption behavior but that lie outside of an organization's control (Mathur et al. 2008; Moschis 2007). Considering stress due to technologies, Tarafdar et al. (2010) investigated the effects of technostress on customers' satisfaction; Lee et al. (2014) evaluated smartphones as stressors in this context. Blut et al. (2020) investigated customer participation role stress in a co-development setting, emphasizing that customer participation is related to all role stressors (i.e., role conflict, role ambiguity and role overload). Further, they state that higher customer participation in co-development reduces customer satisfaction and perceived value (Blut et al. 2020). The results of Blut et al. (2020) emphasize the importance of a deeper understanding of the emergence of customer stress in the participation process. Hence, Blut et al. (2020) call for more studies investigating customer stress in other stages of the participation process. We seek to address this gap by investigating customer participation in service production. Customer perceptions in terms of perceived stress are especially significant in participation settings in which customer activities cannot be replaced by service providers, as customers' input or performance is vital to the outcome of the participation process.

Moreover, while Blut et al. (2020) predominantly address outcomes or consequences of customer stress in participation settings we focus on the emergence of CPS, i.e. we identify and test relevant antecedents.

Our definition and conceptualization of CPS builds on stress literature (Lazarus & Folkman 1984; LePine et al. 2004). Embracing the notion of customers as partial employees, we consider the job stress literature in particular (Chan et al. 2010; Gupta & Beehr 1979). Job stress results from extreme or noxious demands on an employee in his or her work role (Gupta & Beehr 1979), such as role ambiguity, role conflict, and work overload. We assume that CPS is comparable to job stress but differs in its genesis: in other words, job stress can emerge from various aspects in employee environments, such as variance in their workloads, organizational characteristics, or personal values (Beehr & Newman 1978), while CPS might result from the characteristics of customer participation, such as effort (Hoyer et al. 2010), providing or sharing information (Chan et al. 2010), and close employee–customer interactions. Stress is always rooted in personal perceptions of a situation (Lazarus & Folkman 1984). As such, not every customer perceives customer participation as equally stressful.

2.3 The CPD-R Model

The Job Demands–Resources Model. To develop a comprehensive model of the drivers and consequences of CPS, we built on the JD-R model (Bakker & Demerouti 2007, 2017; Demerouti et al. 2001). This model is well established in psychology and organizational behavior literature as a framework to investigate job stress in various occupations (Bakker & Demerouti 2007, 2017). It predicts that working conditions, classified as demands or resources, largely determine employee well-being (Demerouti et al. 2001). *Demands* are physical, psychological, social, or organizational aspects of a job that require effort or skill from an employee to deal with, including work pressure, time pressure, or emotional aspects (e.g., emotionally challenging situations) (Bakker et al. 2010; Bakker & Demerouti 2007; Demerouti et al. 2001). *Resources* are "physical, psychological, social, or organizational aspects of a job that are either/or a) functional in achieving work goals, b) reduce job demands and the associated physiological and psychological costs, c) stimulate personal growth, learning, and development" (Bakker & Demerouti 2007). A lack of resources might cause disengagement from work (Demerouti et al. 2001), but the presence of resources can buffer the negative effects of demands (Bakker et al. 2005). Hence, demands and resources are inversely related: demands hinder employees from using their resources, while resources diminish the negative effects of demands (Bakker et al. 2005; Demerouti et al. 2001). In terms of output, both the presence of demands and the absence of resources can diminish employee performance (Bakker et al. 2004).

Findings from JD-R research have demonstrated negative effects of stressors on performance (Bakker et al. 2004). For example, high stress levels tend to result in withdrawal behavior, such that employees might be inclined to avoid adverse situations and reduce their input (Gupta & Beehr 1979; LePine et al. 2004; Motowidlo et al. 1986). We define customer participation as a behavioral construct that measures the extent to which customers perform activities. As such, we assume that CPS likewise affects customer behavior during the service process (i.e., customer participation). In a similar vein, previous research has found that customers who perceive a threatening situation might seek to change it (Gabbott et al. 2011; Lazarus & Folkman 1984). Such changes might result in avoiding or changing the service provider in the future. However, during an ongoing service process, the easiest way out might be to reduce input into the service process. Hence, we presume

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.

that customers who perceive participation stress in the service encounter might reduce their participation efforts:

Hypothesis 1: CPS reduces customer participation.

Demands. Applying the JD-R model to a customer context (see Figure 1), we posit that customer participation demands are physical, psychological, social, or organizational aspects of the participation process that require specific skills from customers. Demerouti et al. (2001) introduced job demands as stressors, distinguished by job-related situations. Accordingly, we consider participation demands as stressors, distinguished by the participation process.

Participating, in the form of information-sharing and decision-making, requires cognitive abilities and involves various cognitive demands (van Ruysseveldt et al. 2011). Customers often perceive knowledge-intensive services as particularly complex (Hausman 2003) because of their high cognitive demands (Molino et al. 2016; van den Broeck et al. 2010; van Ruysseveldt et al. 2011). Cognitive demands consolidate various cognitive requirements, such as concentration and precision (Molino et al. 2016; van Ruysseveldt et al. 2011). Demands, as stressors in the JD-R model (Demerouti et al. 2001), cause reactions such as stress (Bakker et al. 2003; Bakker et al. 2005). Accordingly, we hypothesize:

Hypothesis 2: Cognitive demands increase CPS.

JD-R and service research has also cited inappropriate customer behavior (e.g., verbal aggression, disliked customers, ambiguous or disproportionate expectations) as a demand (Dormann & Zapf 2004; Frey-Cordes et al. 2020; Stock & Bednarek 2014). Similarly, in complex service settings that require substantial participation effort (Hoyer et al. 2010) and customer–employee interaction, the service employee might be a relevant stressor for the customer during service creation. In particular, *disliking an employee* suggests a relevant social stressor, as it occurs when customers perceive employees as lacking a sense of humor, being unfriendly, or seeming arrogant (Dormann & Zapf 2004). A disliked employee should be as stressful for a customer as disliked customers are for employees (Dormann & Zapf 2004). In accordance with this reasoning, we hypothesize:

Hypothesis 3: A disliked employee increases CPS.

Resources. A lack of resources prevents employees from meeting their job demands (Demerouti et al. 2001), leading to a variety of negative outcomes, such as disengagement and strain. Available resources can help people cope with demands and acquire new resources (Demerouti et al. 2001; Hobfoll 1989). In line with the JD-R model, we focus on the resources that can be changed or affected by the service provider or the employee (Demerouti et al. 2001). That is, we define *customer participation resources* as physical, cognitive, psychological, social, or organizational aspects that encourage and enable customers to participate in the service process, enhance the outcomes of the service, or buffer the negative effects of participation demands. In professional service settings, the most relevant participation resources may be cognitive, psychological, and social. Physical and organizational resources might be more relevant in other service settings where customer participation requires contributions other than information or decision-making, such as assembling (e.g., IKEA furniture) or exercising (e.g., weight loss programs).

Research on customer participation has revealed that customers require several abilities to fulfill their tasks (Dong et al. 2015; Meuter et al. 2005). Barrutia and Gilsanz (2013) emphasized the relevance of such resources for value creation and customer satisfaction. Expanding the JD-R model to the customer context, we introduce customer expertise as a new, knowledge-related resource. Customer expertise (i.e., knowledge and literacy) is a well-known resource in customer participation research (Dong et al. 2015) relevant for decision-making and involvement (Auh et al. 2007; van Rooij et al. 2011). We follow Auh et al. (2007) and Sharma and Patterson (2000) in defining *customer expertise* as the customer's accrued knowledge about how a service should be performed. Recent research has also stressed that customers with knowledge and confidence in that knowledge can make better decisions, contribute better to value creation, and make less negative attributions about coproduction (Asaad 2015; Auh et al. 2007; Bendapudi & Leone 2003). Expertise should help customers feel less overtaxed by participation demands. Therefore, we hypothesize:

Hypothesis 4: Customer expertise reduces CPS.

One of the most frequently listed resources in JD-R models is social support (Crawford et al. 2010; Stock & Bednarek 2014). It can have positive effects, such as reducing stress during or after appraisals of a potentially stressful situation (Cohen & Wills 1985; Helgeson 2003). Social support can also mitigate or prevent job stress (Bakker et al. 2005; Cohen & Wills 1985). Therefore, we predict that support offered by an employee (Bakker & Demerouti 2007; Demerouti et al. 2012) is a germane participation resource in close customer–employee interactions.

Hypothesis 5: Social support by employee reduces CPS.

Interaction Effects of Resources and Demands. In developing the JD-R model, Demerouti et al. (2001) emphasized the need to consider the interaction between job demands and resources. Overtaxing resulting from demanding aspects increases if the employee has no resources available to meet those demands. Accordingly, an interaction of high demands and low resources produces the highest levels of burnout, whereas greater resources can buffer the negative effects of demands (Bakker et al. 2005). We assume such a buffering effect also holds for participation resources.

Building on our reasoning for Hypothesis 4, we argue that customers who can draw on their own cognitive abilities can handle the cognitive demands of a service process much better than customers without those required abilities can. This agrees with Dong et al.'s (2015) definition of customers' perceived

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.

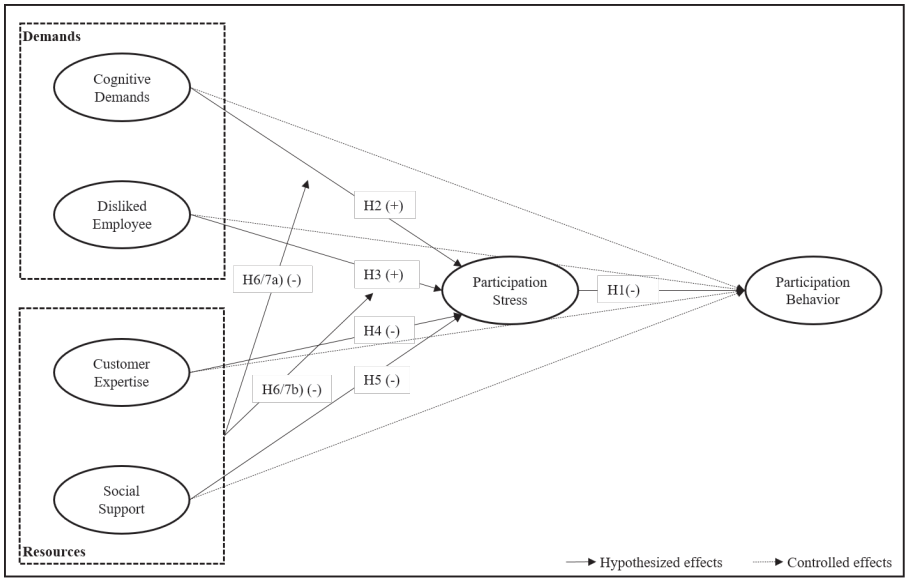

Figure 1. The Proposed Conceptual Framework (CPD-R Model)

ability, which states that customers' knowledge enables them to perform the tasks of the participation process effectively, and that, therefore, knowledge is needed to respond to the respective demands.

JD-R research has found that conflicts or misunderstandings tend to result in uncertainty (Zapf et al. 2001). However, Yim et al. (2012) argued that customers' perceived ability to participate makes them more confident to take action in the participation process. Moreover, Büttgen et al. (2012) found that customers in control are more likely to show the required participation behavior. Accordingly, we assume that customer expertise might compensate for such uncertainty in such a way that customers who can rely on their individual capacity might respond more confidently to cognitive and social demands. Hence, more customer expertise might reduce the effects of unpleasant social interactions (i.e., not liking the employee) as well as challenging cognitive demands and thereby leading to lower levels of stress. Therefore, we hypothesize:

Hypothesis 6: *Customer expertise weakens the positive effect of (a) cognitive demands and (b) disliking of the employee on CPS.*

Finally, social support from an employee might compensate for the negative aspects of participation. Emotional support enhances perceptions of service quality (Rafaeli et al. 2008). In organizational behavior research, supervisor support moderates the effect of role ambiguity on employee role strain (Beehr 1976). In turn, we anticipate that social support can reduce the negative consequences of customer–employee interactions, such as the negative emotional outcomes of an interaction with a disliked employee. As we stated, people seek social support during or after their appraisal of a stressful situation (Cohen & Wills 1985; Helgeson 2003). Even if social support cannot offset the cognitive demands of a service setting, we anticipate that it dampens the undesirable effect of cognitive demands on CPS. We propose:

Hypothesis 7: *Social support weakens the positive effect of (a) dislike of the employee and (b) cognitive demands on CPS.*

3. Empirical Studies

3.1 Overview of the Studies

We collected qualitative and quantitative data to ensure a comprehensive understanding of CPS. With a first qualitative study, we sought to provide evidence of the relevance of stress that results from the characteristics of the customer participation process and to identify industries in which CPS predominantly occurs. We used a critical incident technique (CIT) survey as our exploratory research design (Gremler 2004; Swan & Rao 1975). The results gave insights into the most common industries where CPS occurs, namely finance and insurance. Subsequently, we focused on financial services in the following. In financial services settings such as retail banking, customers must judge the risks and potential returns of investing in a proposed plan, stock, or bond according to their specific needs. Consequently, the requirements tend to be complex and mentally demanding for customers, (Crosby et al. 1990; van Rooij et al. 2011). However, financial decisions can have far-reaching consequences and structural reforms increasingly shift responsibility to consumers. Nevertheless, high product complexity provides customers with various options to customize and take control of the process (Auh et al. 2007), which makes it an ideal setting to investigate customer participation, on the one hand, and to reveal potential threats, on the other.

We ran a quantitative study in the context of financial services to gain a better understanding of the antecedents of CPS and their inter-relationships, hence, tested our CPD-R model.

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.

3.2 Exploring CPS: A Critical Incident Technique Study

Data Collection and Sample Characteristics. First, we conducted interviews using the critical incident method. A critical incident study is especially useful "as an exploratory method to increase knowledge about a little-known phenomenon" (Gremler 2004, p.67). In service research, collecting data on critical incidents generally requires respondents to relate service experiences they have had as accurately as possible (Gremler 2004). The survey first asked participants to detail a situation in which they experienced negative stress during a service encounter in which they actively participated. In the following, respondents were asked to describe this situation as accurately as possible and if the service provider intervened in any way to reduce perceived stress. Respondents could relate as many situations as they could recall.

The data were collected both in personal interviews and in an online survey to ensure that we gained as much insight as possible even if respondents might have felt reluctant to report their experiences. Participants were recruited via personal contacts, social media websites, online networks (e.g., LinkedIn), and the university website. No incentives were offered to respondents and participation in the survey was voluntary. We asked 57 respondents of which 39 participated in the online survey. Of the respondents, 64% were women, and their mean age was 33.2 years.

The data collection produced a sample of 140 incidents that two independent coders manually scrutinized.

Classification of Incidents. First, both coders performed a manual content analysis and distinguished incidents by the source of reported stress. We sought incidents that were in line with our prior definition of CPS. This defined the boundaries of the incidents we looked for as we were not interested in incidents in which (a) customers were not actively involved and (b) customer stress was attributable to other circumstances than the characteristics of participation (e.g., environmental factors, service failure).

Second, both coders classified the CPS incidents according to the North American

Industry Classification System (NAICS) to determine in which industries CPS frequently occurs. Both coders were able to classify incidents to all sub-categories of the NAICS. However, we summarized incidents in the main categories after both coders and all authors agreed on the incidents' categorizations.

Results. Eighteen reported incidents were stressful due to a service failure and 34 were not classifiable (e.g., respondents could not convey the service process precisely). In 88 incidents, the respondents indicated being stressed during a regular service encounter. Exemplary quotes from these interviews are:

- "All the information-gathering and preparation for the consultation is very stressful for me."
- "I often feel compelled at insurance companies: I have to make decisions, but I do not have the necessary information available to make a proper one, and I feel like I have to judge all the options right in that moment. That causes stress."

Two independent coders classified the industries mentioned in the interviews (see Table I). The most commonly named industry was finance and insurance (20.45%), followed by information (telecommunication and software services) (12.5%).

Table I. Number of Incidents of Perceived CPS per NAICS Industry

NAICS Industry	N (Incidents)	% (Incidents)
Finance and Insurance	18	20.45
Information	11	12.50
Other Services (except Public Administration)	9	10.23
Clothing Stores	8	9.09
Supermarkets and Other Grocery (except Convenience) Stores	8	9.09
Health Care and Social Assistance	7	7.95
Accommodation and Food Services	7	7.95
Transportation and Warehousing	5	5.68
Construction	3	3.41
Manufacturing	3	3.41
Electronic Shopping and Mail-Order Houses	3	3.41
Public Administration	2	2.27
Utilities	1	1.14
Wholesale Trade	1	1.14
Sporting Goods Store	1	1.14
Administrative and Support and Waste Management and Remediation Services	1	1.14
∑	**88**	**100**

3.3 Discussion of Findings

The incidents from the CIT confirmed the relevance of CPS in the service process as customers reported stress in flawlessly delivered services. Even in this small sample, respondents recalled an average of 2.4 stressful incidents, and 63% of the reported incidents involved typical characteristics of customer participation (Chan et al. 2010; Hoyer et al. 2010) and CPS.

3.4 Antecedents and Consequences of CPS: A quantitative survey-based study

Data Collection and Participants. To investigate the antecedents and effects of CPS at the customer level, we relied on a professional online consumer panel and surveyed retail bank customers in Germany who had used a financial advisory service in the previous six months (49.6% had received advice in the past three months). Of the 589 participants who completed the survey, we discarded 67 cases with missing or

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.

unusable responses. As such, the final sample comprised 522 responses.

Sample Characteristics. In the final sample, 49.2% of the respondents were women. The mean age was 40.12 years. The median monthly income per household was between €1,501 and €2,600. The respondents were clients of different financial institutions: private banks (23.2%), savings banks (46.4%), cooperative banks (23.8%), online banks (6.1%), and others (0.6%). In total, 59.8% of the respondents had interacted with their financial consultants twice a year or more. The mean length of this relationship was 15.06 years.

Measures. Table II presents the survey variables and measures. We relied on measures from prior research and used seven-point multi-item Likert-type scales. We assessed *cognitive demands* with four items from the questionnaire on the experience and evaluation of work (QEEW) by van Veldhoven and Meijman (1994). To measure *disliked employee* (four items), we adapted Dormann and Zapf 's (2004) measure of customer-related stressors for employees. *Customer expertise* relied on a four-item scale suggested by Hamilton and Thompson (2007) and Mitchell and Dacin (1996). We adapted three items for *social support* from Dormann and Zapf (2004) and the QEEW (van Veldhoven & Meijman 1994) to match the customer context. We measured *customer participation* with three items from Auh et al. (2007), Chan et al. (2010), and Yim et al. (2012). We developed new items to measure CPS. Prior studies measured stress as the extent to which participants perceive specific situations as stressful (e.g., Bono et al. 2013; LePine et al. 2004). On the basis of in-depth interviews with 15 financial advisors and ten customers, we developed a set of items to test stress resulting from the characteristics of the interactive participation process. Validating the uniqueness of the construct, we performed an exploratory factor analysis with the created items and related constructs. We therefore collected data from 217 participants in a separate study, rating stress during a service encounter. We adapted measures for employee job stress (Chan et al. 2010) and technostress (Tarafdar et al. 2007) and approached a factor analysis with principal axis factoring and a promax rotation. We were left with three extracted factors, confirming the anticipated constructs. Applying reliability analysis, we deleted one CPS item, and were thus left with four items reflecting customer participation stress: (1) experienced stress due to their participation (CPS1); (2) overextension owing to the requirements of the service process (CPS2); (3) feeling unwell due to participating (CPS3); and (4) perceived strain during the customer participation process (CPS4).

Reliability Tests. We calculated Cronbach's alpha coefficients for all measures (see Table II). Analyzing the implicit factor structure with an exploratory factor analysis, we built a measurement model. We tested the model using AMOS 24 software and achieved reasonable fit (χ^2 = 810,249; df = 254; p < .001; confirmatory fit index [CFI] = .952; Tucker–Lewis index [TLI] = .943; root mean square error of approximation [RMSEA] = .065). All thresholds of all other relevant criteria are met, too (see Table III).

Common Method Variance. Using a cross-sectional survey design raised the risk of common method variance (CMV) (Podsakoff et al. 2003). We applied several methods to reduce this threat (different scale anchors, counterbalancing question order, improving scale items) and then tested for CMV using Lindell and Whitney 's (2001) marker variable procedure. A three-item scale by Tierney and Farmer (2011) that measures creative self-efficacy (Cronbach's α = .89) offered an ideal marker (Simmering et al. 2015). We selected the lowest positive correlation between the marker variable and the other variables (r_s = .054; cognitive demands) to adjust the correlations and estimate their statistical significance (Lindell & Whitney 2001). The adjusted correlations are in the upper right diagonal of Table III. All relevant, statistically significant, zero-order correlations remained significant. As such, CMV did not appear to bias our findings.

Hypotheses Tests. To test our hypotheses, we built a structural model with all the hypothesized effects and controlled for direct effects of demands and resources on customer participation. We estimated the model with a maximum likelihood procedure and found good fit (χ^2 = 735,660; df = 192; p < .001; χ^2/df = 3.83; CFI = .948; TLI = .938; RMSEA = .074). As we predicted in Hypothesis 1, CPS negatively affected customer participation (-.16, p < .05). As also predicted, participation demands increased CPS. In line with Hypotheses 2 and 3, we found significant, positive effects of both cognitive demands (.39, p < .001) and disliked employee (.49, p < .001) on CPS. In support of Hypothesis 4, customer expertise negatively affected CPS (-.15, p < .001). We also found support for Hypothesis 5 in that social support negatively affected CPS (-.14, p < .001). In summary, while controlling for direct effects of demands and resources on customer participation, all five main hypotheses received support, which affirms our proposed theoretical model.

Moderation Analyses. In Hypotheses 6 and 7, we predicted that resources would moderate the positive effects of participation demands on CPS. Following Marsh et al. (2006), we created interaction terms through pairwise matching of items from the respective constructs and included them in our model. In support of Hypothesis 6, customer expertise buffered the increasing effect of cognitive demands on CPS (-.42, p < .001). However, in contrast with Hypothesis 6b, we found a positive interaction effect of dislike of the employee and customer expertise on CPS (.14, p < .001). The results did not support Hypothesis 7a, either; social support did not buffer dislike of the employee (.44, p < .001)—in fact, it amplified its positive effect. For Hypothesis 7b, we found a negative interaction of social support and cognitive demands (-.13, p < .001), which supports the hypothesized effect.

Control Variables. We controlled for direct effects of resources and demands on customer participation and tested the mediat-

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.

Table II. Variables and Measures

Construct	Measures	Item factor loadings	Coefficient ☋	M/SD	Sources
Customer participation	■ I put a lot of effort into expressing my personal needs to the consultant.	.851	0.88	5.00/ 1.46	Auh et al. (2007); Chan, Yim, and Lam (2010); Yim, Chan, and Lam (2012)
	■ I provide suggestions to the consultant for improving the service outcomes.	.887			
	■ I have a high level of participation in the service process.	.798			
Customer participation stress	■ I experience stress when participating in the service process.	.852	0.95	2.95/ 1.76	Newly developed
	■ During the service process, I have to fulfill requirements that overtax my skills and abilities.	.884			
	■ I feel unwell when I have to participate in the service process.	.938			
	■ Participating in the service process is a strain for me.	.936			
Cognitive demands	During a financial advisory I have to…		0.89	4.60/ 1.73	van Veldhoven and Meijman (1994)
	■ concentrate very hard.	.842			
	■ focus on many things at the same time.	.825			
	■ think a lot.	.914			
	■ be attentive the whole time.	.735			
Disliked employee	My consultant…		0.94	2.48/ 1.69	Dormann and Zapf (2004)
	■ has no sense of humor.	.766			
	■ is an unpleasant person.	.893			
	■ treats me contemptuously.	.950			
	■ appears arrogant.	.948			
Customer expertise	■ Generally speaking, I am very familiar with the products of my bank.	.806	0.92	4.33/ 1.77	Hamilton and Thompson (2007); Mitchell and Dacin (1996)
	■ I know exactly how a financial advisory typically proceeds.	.763			
	■ I know a lot about financial products.	.962			
	■ Comparing my financial knowledge with others, my knowledge is rather high.	.919			
Social support	■ There are no conflicts between me and my consultant.	.797	0.92	5.50/1.61	van Veldhoven and Meijman (1994)
	■ I feel appreciated by my consultant.	.919			
	■ There is always a good atmosphere between me and my consultant.	.968			

Note: All items were measured on seven-point Likert-type scales.

ing effect of all four variables via CPS. Using the bootstrapping method proposed by Zhao et al. (2010) we found a competitive mediation for cognitive demands (indirect effect: -.06, $p < .05$; direct effect: .4, $p < .001$), which we will discuss later on. We

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.

also found an indirect-only mediation for disliked employees (indirect effect: -.08, $p < .05$; direct effect: .05, n.s.) and a complementary mediation for both resources, that is, expertise (indirect effect: .03, $p < .05$; direct effect: .31, $p < .001$) and social support (indirect effect: .02, $p < .05$; direct effect: .27, $p < .001$).

The model explained 35% of the variance in customer participation and 49% of the variance in CPS. Table IV provides a comprehensive overview of the results.

3.5 Discussion of Findings

The results show that participation demands enhance CPS, and in a complex service setting such as financial services, it should come as no surprise that a strong effect resulted from cognitive demands. An interesting finding appeared in the mediation analysis where we found a competitive mediation for cognitive demands. Therefore, while cognitive demands in general increased customer participation, an increase in CPS caused the customer to reduce their participation. Most studies have understood cognitive demands as challenge demands, which can have positive effects on personal performance (LePine et al. 2004; LePine et al. 2005; van den Broeck et al. 2010). Based on our results we assume that, in customer participation which cannot be replaced by the service provider, customers face cognitive demands and strive to fulfill them because they perceive them as unavoidable. Hence, the demands increase participation behavior as long as the customer is not constrained by CPS. Our assumption is also in agreement with the moderation analysis, which found that customers were less stressed by cognitive demands as long as they had the cognitive resources (i.e., expertise) to respond to the demands.

Regarding customers' resources, as we predicted, customer expertise and social support reduced CPS in financial services. However, in contrast with prior research (Bakker et al. 2005; Cohen & Wills 1985; Demerouti et al. 2001), we did not find that social support buffers the effects of all participation demands. In the case of high demands caused by disliking the employee, social support can even enhance unwanted effects. According to Cohen and Wills (1985), social support should have a direct effect on well-being or else buffer appraisals and reappraisals of stress. We predicted that social support would buffer the appraisal of stress, yet our results showed the contrary, implying that support from a disliked employee may actually cause additional strain. We propose an explanation based on an underlying process: social support generates proximity between the employee and the customer, which might appear inappropriate or unexpected for professional services. If the customer does not like the employee, such an approach may be even more harmful. Customers who are locked in a participation process must cope with this unpleasant interpersonal interaction while simultaneously engaging in cognitively demanding participation tasks. As such, customers' overextension increases even further. On the other hand, as we predicted, social support can reduce the effect of cognitive demands on CPS.

Table III. Correlation Matrix

	Variable	1	2	3	4	5	6	7	AVE	FR	R^2
1	**Expertise**	**0.87**	0.34***	-0.26***	-0.11**	-0.08 n.s.	0.12**	0.48***	0.75	0.92	
2	**Customer participation**	0.38***	**0.85**	-0.19***	0.26***	-0.20***	0.29***	0.30***	0.72	0.88	0.35
3	**CPS**	-0.20***	-0.13**	**0.90**	0.43***	0.58***	-0.53***	-0.14**	0.82	0.95	0.49
4	**Cognitive demands**	-0.05 n.s.	0.30***	0.46***	**0.83**	0.10*	-0.14**	0.00	0.69	0.90	
5	**Disliked employee**	-0.02 n.s.	-0.14**	0.60***	0.14***	**0.89**	-0.66***	-0.14**	0.80	0.94	
6	**Social support**	0.17***	0.33***	-0.45***	-0.08 n.s.	-0.60***	**0.90**	0.17***	0.81	0.93	
7	**Marker**	0.50***	0.34***	-0.08 n.s.	0.05 n.s.	-0.08 n.s.	0.21***	**0.85**	0.72	0.89	

Notes: Zero-order correlations are below the diagonal; adjusted correlations for potential CMV (Lindell and Whitney 2001) are above the diagonal. Lowest positive correlation between marker and other variables: .05 *p < .05, **p < .01, ***p < .001. Diagonal elements in bold are square roots of average variance extracted. AVE = average variance extracted; FR = factor reliability; CPS = customer participation stress; n.s. = not significant.

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.

Table IV. Study Results

	Hypothesis supported		*P*
Direct			
CPS → Customer Participation (H1)	✓	-.16	< .05
Cognitive Demands → CPS (H2)	✓	.39	< .001
Disliked Employees → CPS (H3)	✓	.49	< .001
Expertise → CPS (H4)	✓	-.15	< .001
Social Support → CPS (H5)	✓	-.14	< .001
Interaction			
Expertise x Cognitive Demands (H6a)	✓	-.42	< .001
Expertise x Disliked Employee (H6b)	-	.14	< .001
Social Support x Disliked Employee (H7a)	-	.44	< .001
Social Support x Cognitive Demands (H7b)	✓	-.13	< .001

4. Theoretical Implications

This article contributes to service research in four ways. First, this article complements existing research on the dark side of customer participation (Auh et al. 2007; Dong & Sivakumar 2017; Haumann et al. 2015) and deepens the understanding of the emergence of customer participation stress (Blut et al. 2020). The results of our quantitative study confirmed the prediction that CPS reduces customer participation. In this sense, CPS is critical because it might mitigate the positive effects of customer participation that have been identified in previous research (Haumann et al. 2015; Kelley et al. 1992). By investigating customer stress and by revealing interactional stressors (i.e., participation demands) that customers perceive during a regularly delivered service experience, we especially build upon research about stress in the process of customer participation (Chan et al. 2010). While prior research has stated various reasons for job stress, such as role conflicts outside (Netemeyer et al. 2005) or within (Hsieh & Yen 2005) work settings, CPS emerges specifically from participation activities which cannot be replaced by the service provider during the participation process affecting customer participation behavior. We conceptualized CPS accordingly, tested it against other stress measures, and obtained discriminant validity, indicating that CPS is truly different from other stress measures and so of special interest for further participation research.

Second, we developed the CPD-R model, revealing demands as drivers of CPS and highlighting customer resources as barriers in the emergence of stress. In doing this, we expand upon JD-R theory (Bakker & Demerouti 2007, 2017; Menguc et al. 2020) and complement previous studies about the customer's role as partial employee. We enrich JD-R research with a completely new object of investigation by identifying similarities and differences in the emergence of stress in service customers in their role as partial employees. The results showed, on the one hand, that customers need resources such as expertise and social support to complete their tasks in the service participation process. On the other hand, our results confirmed that customer–employee interactions impose context-specific demands on customers. As such, our research provides evidence for the generalizability of the JD-R model and for the necessity of context-specific adaptions by introducing new customer-specific variables (i.e., customer expertise, disliking employees, CPS).

Third, we contribute to JD-R research, differentiating demands into challenge and hindrance demands (Bakker & Sanz-Vergel 2013; LePine et al. 2005) in a twofold way. With regard to demands, we partially confirm but also contradict previous research as our results demonstrate that cognitive demands directly affect customer participation in a positive way, thereby appearing to be a challenge stressor. At the same time, our results show a negative indirect effect on customer participation via CPS. This indicates a hindrance stressor that leads to distress and, in turn, decreased customer participation. Therefore, we build upon previous research by revealing a customer demand being an ambivalent stressor. Customer expertise does not decrease the effect of disliking the employee on CPS; rather, it strengthens it. We presume that customers who can rely on their expertise to fulfill the participation requirements would feel that they could control the process. Further, our results show that resources do not always function in the intended way. Social support does not reduce the effect of disliking the employee on CPS; quite the opposite, it strengthens it. We assume that customers find it annoying to work with someone they do not like and whose presence is outside of their control and, therefore, perceive even more CPS.

Fourth, we contribute to research on customer–employee interactions (Frey et al. 2013; Stock & Bednarek 2014) by showing that customers not only serve as sources of demands and resources to employees (Stock & Bednarek 2014) but that this also takes effect in the opposite direction—for example, if customers dislike the employee or the employee provides social support. Our results show that employees represent as much demands and resources for customers on cognitive and social levels as are customers for employees. Hence, it is risky to promote customer participation as a universal remedy

5. Managerial Implications

The findings of our study provide three primary insights and implications for managers. First, participation tasks can stress customers, thereby impairing their contributions to the desired service outcome. Service managers and organizations must consider this threat in their service design. They should clarify to what extent and in which way customer participation is replaceable—for example, by employees—to reduce potential strains for the customer. In financial services, for example, some kinds of customer contribution might be replaced by AI-

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.

based technology that is able to detect customer risk affinity or identify appropriate financial products based on available customer data (Huang & Rust 2020). In this way, service providers could reduce some cognitive demands and prevent customers from becoming stressed. However, as there is an increasing direct effect of cognitive demands on customer participation, mangers are facing a dilemma with regards to the extent to which they want to implement cognitively demanding tasks for customers. In cases of customer participation which are not replaceable by service providers, they should sensitize employees to potential indicators of stress and provide them with psychological training for detecting and handling stressed customers. To achieve a feeling of success rather than stress within the service process, employees might be given different process guidelines for the different intellectual capacities of customers. They can follow an easier one if they recognize the customer as being over-challenged by the cognitive tasks present in the consultation.

Second, service providers should work to improve customer–employee relationships so that employees never become social stressors for their customers or amplify participation demands with inappropriate support behavior. With information from customer surveys or AI-based data analyses, managers could proactively match customers with designated employees or else permit customers to choose or switch consultants if they do not get along well. Using intelligent chat bots or robo-advisors might also be an alternative to disliked employees in some cases. If a personal mismatch with a customer is unavoidable, employees should provide detailed information that can increase customer expertise rather than provide social support.

Third, organizations should extend their service processes to include customer expertise, for example, by providing informative material and workshops to increase people's financial knowledge. However, prospective customers cannot be pushed to participate in training, because doing so would increase pressure or participation demands even further. Instead, they should be provided with guidelines for how customers may contribute to the service outcome, such as the documentation they need to bring to appointments.

6. Limitations and Directions for Further Research

Several limitations of this study suggest further research directions. We used a cross-sectional research design, whereas longitudinal investigations could offer a better sense of the causal relationships and size effects in our proposed model. The data collection and study design might also be improved upon with a field study to include employee perspectives to evaluate customer knowledge or the customer–employee relationship.

In addition, our research primarily focused on a single service setting: retail banking. Further research might be extended to other areas that are complex, risky, or associated with specialized knowledge (e.g., legal services, healthcare). Alternatively, researchers could add new developments, such as robo-advisors or AI, and consider CPS in other service contexts that are not characterized by high cognitive demands but that invoke high emotional involvement, such as dating services, tourism, or hair salons. Additional research might consider service settings in which customers have more options to increase or decrease their participation behavior. In such alternative settings, the stress-buffering function of employee support might emerge. Researchers can use the results of our CIT study as a guideline for which sectors might be of interest and then consider different facets of their respective services and the resulting effects on CPS. Another approach might be to include other demands, such as language difficulties, cultural foreignness or time pressure. Managers would likely be interested in how service firms could reduce stress associated with participation as well as in the effects of CPS on other service outcomes, such as customer satisfaction, word of mouth, or avoidance. Alternatively, more physical measures of stress, using brain activity or blood levels, could clarify the effects on customer performance. While our research focused on customer participation in human interactions, new forms of service interactions such as service robots might become even more important and might introduce different stressors (Keyser et al. 2019). In particular, the emerging presence of technological touchpoints might be a starting point for future research, mapping both customer participation in the customer journey as well as investigating potential stressors in each step of the participation process.

References

Albrecht, C.-M., Hattula, S., & Lehmann, D. R. (2017). The relationship between consumer shopping stress and purchase abandonment in task-oriented and recreation-oriented consumers *Journal of the Academy of Marketing Science*, *45*(5), 720–740.

Arnold, T., Flaherty, K. E., Voss, K. E., & Mowen, J. C. (2009). Role Stressors and Retail Performance: The Role of Perceived Competitive Climate *Journal of Retailing*, *85*(2), 194–205.

Asaad, C. T. (2015). Financial literacy and financial behavior: Assessing knowledge and confidence *Financial Services Review*, *24*(2), 101–117.

Auh, S., Bell, S. J., McLeod, C. S., & Shih, E. (2007). Co-production and customer loyalty in financial services *Journal of Retailing*, *83*(3), 359–370.

Baker, J., & Wakefield, K. L. (2012). How consumer shopping orientation influences perceived crowding, excitement, and stress at the mall *Journal of the Academy of Marketing Science*, *40*(6), 791–806.

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art *Journal of Managerial Psychology*, *22*(3), 309–328.

Bakker, A. B., & Demerouti, E. (2017). Job Demands–Resources Theory: Taking Stock and Looking Forward *Journal of Occupational Health Psychology*, *22*(3), 273–285.

Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job Resources Buffer the Impact of Job Demands on Burnout *Journal of Occupational Health Psychology*, *10*(2), 170–180.

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.

Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2003). Dual processes at work in a call centre: An application of the job demands – resources model *European Journal of Work and Organizational Psychology*, *12*(4), 393–417.

Bakker, A. B., Demerouti, E., & Verbeke, W. (2004). Using the Job Demands-Resources Model to Predict Burnout and Performance *Human Resource Management*, *43*(1), 83–104.

Bakker, A. B., & Sanz-Vergel, A. I. (2013). Weekly work engagement and flourishing: The role of hindrance and challenge job demands *Journal of Vocational Behavior*, *83*(3), 397–409.

Bakker, A. B., van Veldhoven, M., & Xanthopoulou, D. (2010). Beyond the Demand-Control Model: Thriving on High Job Demands and Resources *Journal of Personnel Psychology*, *9*(1), 3–16.

Barrutia, J. M., & Gilsanz, A. (2013). Electronic Service Quality and Value: Do Consumer Knowledge-Related Resources Matter? *Journal of Service Research*, *16*(2), 231–246.

Beehr, T. A. (1976). Perceived Situational Moderators of the Relationship Between Subjective Role Ambiguity and Role Strain *Journal of Applied Psychology*, *61*(1), 35–40.

Beehr, T. A., & Newman, J. E. (1978). Job Stress, Employee Health, and Organizational Effectiveness: A Facet Analysis, Model, and Literature Review *Personnel Psychology*, *31*(4), 665–699.

Bendapudi, N., & Leone, R. P. (2003). Psychological Implications of Customer Participation in Co-Production *Journal of Marketing*, *67*(1), 14–28.

Blut, M., Heirati, N., & Schoefer, K. (2020). The Dark Side of Customer Participation: When Customer Participation in Service Co-Development Leads to Role Stress *Journal of Service Research*, *23*(2), 156–173.

Bone, S. A., Fombelle, P. W., Ray, K. R., & Lemon, K. N. (2015). How Customer Participation in B2B Peer-to-Peer Problem-Solving Communities Influences the Need for Traditional Customer Service *Journal of Service Research*, *18*(1), 23–38.

Bono, J. E., Glomb, T. M., Shen, W., Kim, E., & Koch, A. J. (2013). Building Positive Resources: Effects of Positive Events and Positive Reflection on Work Stress and Health *Academy of Management Journal*, *56*(6), 1601–1627.

Büttgen, M., Schumann, J. H., & Ates, Z. (2012). Service Locus of Control and Customer Coproduction *Journal of Service Research*, *15*(2), 166–181.

Chan, K. W., Yim, C. K., & Lam, S. S. (2010). Is Customer Participation in Value Creation a Double-Edged Sword? Evidence from Professional Financial Services Across Cultures *Journal of Marketing*, *74*(3), 48–64.

Chiang, F. F., Birtch, T. A., & Kwan, H. K. (2010). The moderating roles of job control and work-life balance practices on employee stress in the hotel and catering industry *International Journal of Hospitality Management*, *29*(1), 25–32.

Cohen, S., & Wills, T. A. (1985). Stress, Social Support, and the Buffering Hypothesis *Psychological Bulletin*, *98*(2), 310–357.

Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking Job Demands and Resources to Employee Engagement and Burnout: A Theoretical Extension and Meta-Analytic Test *Journal of Applied Psychology*, *95*(5), 834–848.

Crosby, L. A., Evans, K. R., & Cowles, D. (1990). Relationship Quality in Services Selling: An Interpersonal Influence Perspective *Journal of Marketing*, *54*(3), 68–81.

Demerouti, E., Bakker, A. B., & Fried, Y. (2012). Work orientations in the job demands-resources model *Journal of Managerial Psychology*, *27*(6), 557–575.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The Job Demands-Resources Model of Burnout *Journal of Applied Psychology*, *86*(3), 499–512.

Dong, B., & Sivakumar, K. (2017). Customer participation in services: domain, scope, and boundaries *Journal of the Academy of Marketing Science*, *45*(6), 944–965.

Dong, B., Sivakumar, K., Evans, K. R., & Zou, S. (2015). Effect of Customer Participation on Service Outcomes: The Moderating Role of Participation Readiness *Journal of Service Research*, *18*(2), 160–176.

Dormann, C., & Zapf, D. (2004). Customer-Related Social Stressors and Burnout *Journal of Occupational Health Psychology*, *9*(1), 61–82.

Frey, R.-V., Bayon, T., & Totzek, D. (2013). How Customer Satisfaction Affects Employee Satisfaction and Retention in a Professional Services Context *Journal of Service Research*, *16*(4), 503–517.

Frey-Cordes, R., Eilert, M., & Büttgen, M. (2020). Eye for an eye? Frontline service employee reactions to customer incivility *Journal of Services Marketing, 34*(7), 939-953.

Gabbott, M., Tsarenko, Y., & Mok, W. H. (2011). Emotional Intelligence as a Moderator of Coping Strategies and Service Outcomes in Circumstances of Service Failure *Journal of Service Research*, *14*(2), 234–248.

Gong, T., Choi, J. N., & Murdy, S. (2016). Does Customer Value Creation Behavior Drive Customer Well-being? *Social Behavior and Personality: An International Journal*, *44*(1), 59–75.

Gremler, D. D. (2004). The Critical Incident Technique in Service Research *Journal of Service Research*, *7*(1), 65–89.

Gupta, N., & Beehr, T. A. (1979). Job Stress and Employee Behaviors *Organizational Behavior and Human Performance*, *23*(3), 373–387.

Halbesleben, J. R. B., & Stoutner, O. K. (2013). Developing Customers as Partial Employees: Predictors and Outcomes of Customer Performance in a Services Context *Human Resource Development Quarterly*, *24*(3), 313–335.

Hamilton, R. W., & Thompson, D. V. (2007). Is There a Substitute for Direct Experience? Comparing Consumers' Preferences after Direct and Indirect Product Experiences *Journal of Consumer Research*, *34*(4), 546–555.

Haumann, T., Güntürkün, P., Schons, L. M., & Wieseke, J. (2015). Engaging Customers in Coproduction Processes: How Value-Enhancing and Intensity-Reducing Communication Strategies Mitigate the Negative Effects of Coproduction Intensity *Journal of Marketing*, *79*(6), 17–33.

Hausman, A. V. (2003). Professional service relationships: A multi-context study of factors impacting satisfaction, re-patronization, and recommendations *Journal of Services Marketing*, *17*(3), 226–242.

Heidenreich, S., Wittkowski, K., Handrich, M., & Falk, T. (2015). The dark side of customer co-creation: exploring the consequences of failed co-created services *Journal of the Academy of Marketing Science*, *43*(3), 279–296.

Helgeson, V. S. (2003). Social support and quality of life *Quality of Life Research*, *12*(1), 25–31.

Hobfoll, S. E. (1989). Conservation of Resources: A New Attempt at Conceptualizing Stress *American Psychologist*, *44*(3), 513–524.

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.

Hoyer, W. D., Chandy, R., Dorotic, M., Krafft, M., & Singh, S. S. (2010). Consumer Cocreation in New Product Development *Journal of Service Research*, *13*(3), 283–296.

Hsieh, A., & Yen, C. (2005). The Effect of Customer Participation on Service Providers' Job Stress *The Service Industries Journal*, *25*(7), 891–905.

Hsieh, A.-T., Yen, C.-H., & Chin, K.-C. (2004). Participative customers as partial employees and service provider workload *International Journal of Service Industry Management*, *15*(2), 187–199.

Huang, M.-H., & Rust, R. T. (2020). Engaged to a Robot? The Role of AI in Service *Journal of Service Research*, 109467052090226.

Kelley, S. W., Skinner, S. J., & Donnelly Jr., J. H. (1992). Organizational Socialization of Service Customers *Journal of Business Research*, *25*(3), 197–214.

Keyser, A. de, Köcher, S., Alkire, L., Verbeeck, C., & Kandampully, J. (2019). Frontline Service Technology infusion: conceptual archetypes and future research directions *Journal of Service Management*, *30*(1), 156–183.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.

Lee, Y.-K., Chang, C.-T., Lin, Y., & Cheng, Z.-H. (2014). The dark side of smartphone usage: Psychological traits, compulsive behavior and technostress *Computers in Human Behavior*, *31*, 373–383.

LePine, J. A., LePine, M. A., & Jackson, C. L. (2004). Challenge and Hindrance Stress: Relationships With Exhaustion, Motivation to Learn, and Learning Performance *Journal of Applied Psychology*, *89*(5), 883–891.

LePine, J. A., Podsakoff, N. P., & LePine, M. A. (2005). A Meta-Analytic Test of the Challenge Stressor-Hindrance Stressor Framework: An Explanation for Inconsistent Relationships Among Stressors and Performance *Academy of Management Journal*, *48*(5), 764–775.

Lindell, M. K., & Whitney, D. J. (2001). Accounting for Common Method Variance in Cross-Sectional Research Designs *Journal of Applied Psychology*, *86*(1), 114–121.

Marsh, H. W., Wen, Z., & Hau, K.-T. (2006). Structural Equation Models of Latent Interaction and Quadratic Effects. In Gregory R. Hancock & Ralph O. Mueller (Eds.) *Structural Equation Modeling: A Second Course* (pp. 225–265). IAP.

Mathur, A., Moschis, G. P., & Lee, E. (2008). A longitudinal study of the effects of life status changes on changes in consumer preferences *Journal of the Academy of Marketing Science*, *36*(2), 234–246.

Menguc, B., Auh, S., & Wang, F. (2020). Customer Participation Variation and Its Impact on Customer Service Performance: Underlying Process and Boundary Conditions *Journal of Service Research*, *23*(3), 299–320.

Meuter, M. L., Bitner, M. J., Ostrom, A. L., & Brown, S. W. (2005). Choosing Among Alternative Service Delivery Modes: An Investigation of Customer Trial of Self-Service Technologies *Journal of Marketing*, *69*(2), 61–83.

Mills, P. K., & Morris, J. H. (1986). Clients as "Partial" Employees of Service Organizations: Role Development in Client Participation *Academy of Management Review*, *11*(4), 726–735.

Mitchell, A. A., & Dacin, P. A. (1996). The Assessment of Alternative Measures of Consumer Expertise *Journal of Consumer Research*, *23*(3), 219.

Molino, M., Bakker, A. B., & Ghislieri, C. (2016). The role of workaholism in the job demands-resources model *Anxiety, Stress, and Coping*, *29*(4), 400–414.

Moschis, G. P. (2007). Stress and consumer behavior *Journal of the Academy of Marketing Science*, *35*(3), 430–444.

Motowidlo, S. J., Packard, J. S., & Manning, M. R. (1986). Occupational Stress: Its Causes and Consequences for Job Performance *Journal of Applied Psychology*, *71*(4), 618–629.

Netemeyer, R. G., Maxham III, J. G., & Pullig, C. (2005). Conflicts in the Work–Family Interface: Links to Job Stress, Customer Service Employee Performance, and Customer Purchase Intent *Journal of Marketing*, *69*(2), 130–143.

Oertzen, A.-S., Odekerken-Schröder, G., Brax, S. A., & Mager, B. (2018). Co-creating services—conceptual clarification, forms and outcomes *Journal of Service Management*, *29*(4), 641–679.

Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies *Journal of Applied Psychology*, *88*(5), 879–903.

Rafaeli, A., Ziklik, L., & Doucet, L. (2008). The Impact of Call Center Employees' Customer Orientation Behaviors on Service Quality *Journal of Service Research*, *10*(3), 239–255.

Sharma, N., & Patterson, P. G. (2000). Switching costs, alternative attractiveness and experience as moderators of relationship commitment in professional, consumer services *International Journal of Service Industry Management*, *11*(5), 470–490.

Simmering, M. J., Fuller, C. M., Richardson, H. A., Ocal, Y., & Atinc, G. M. (2015). Marker Variable Choice, Reporting, and Interpretation in the Detection of Common Method Variance: A Review and Demonstration *Organizational Research Methods*, *18*(3), 473–511.

Stock, R. M., & Bednarek, M. (2014). As they sow, so shall they reap: customers' influence on customer satisfaction at the customer interface *Journal of the Academy of Marketing Science*, *42*(4), 400–414.

Swan, J. E., & Rao, C. P. (1975). The Critical Incident Technique: A Flexible Method for the Identification of Salient Product Attributes *Journal of the Academy of Marketing Science*, *3*(3), 296–308.

Tarafdar, M., Bolman Pullins, E., & Ragu-Nathan, T. S. (2014). Examining impacts of technostress on the professional salesperson's behavioural performance *Journal of Personal Selling & Sales Management*, *34*(1), 51–69.

Tarafdar, M., Tu, Q., & Ragu-Nathan, T. S. (2010). Impact of Technostress on End-User Satisfaction and Performance *Journal of Management Information Systems*, *27*(3), 303–334.

Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. (2007). The Impact of Technostress on Role Stress and Productivity *Journal of Management Information Systems*, *24*(1), 301–328.

Tierney, P., & Farmer, S. M. (2011). Creative Self-Efficacy Development and Creative Performance Over Time *Journal of Applied Psychology*, *96*(2), 277–293.

van den Broeck, A., De Cuyper, N., De Witte, H., & Vansteenkiste, M. (2010). Not all job demands are equal: Differentiating job hindrances and job challenges in the Job Demands–Resources model *European Journal of Work and Organizational Psychology*, *19*(6), 735–759.

van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation *Journal of Financial Economics*, *101*(2), 449–472.

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.

van Ruysseveldt, J., Verboon, P., & Smulders, P. (2011). Job resources and emotional exhaustion: The mediating role of learning opportunities *Work & Stress*, *25*(3), 205–223.

van Veldhoven, M., & Meijman, T. F. (1994). The measurement of psychosocial job demands with a questionnaire: the questionnaire on the experience and evaluation of work (QEEW) *Nederlands Instituut Voor Arbeidsomstandigheden, Amsterdam*.

Yim, C. K., Chan, K. W., & Lam, S. S. K. (2012). Do Customers and Employees Enjoy Service Participation? Synergistic Effects of Self- and Other-Efficacy *Journal of Marketing*, *76*(6), 121–140.

Zapf, D., Seifert, C., Schmutte, B., Mertini, H., & Holz, M. (2001). Emotion Work and Job Stressors and their Effects on Burnout *Psychology and Health*, *16*(5), 527–545.

Zhao, X., Lynch, J. G., & Chen, Q. (2010). Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis *Journal of Consumer Research*, *37*(2), 197–206.

Keywords:

customer participation; job demands; job resources; JD-R model; stress; customer participation stress; professional services; financial services; service employees; service encounter; co-creation

ISSN 2511-8676

SMR JOURNAL OF SERVICE MANAGEMENT RESEARCH

Managing Editors: Prof. Dr. Martin Benkenstein, Institute for Marketing and Service Research, University of Rostock, Ulmenstr. 69, D-18057 Rostock, Phone: +49 381 498-4376, Fax: +49 381 498-4378, E-Mail: martin.benkenstein@uni-rostock.de, Prof. Dr. Marion Büttgen, University of Hohenheim, Chair of Corporate Management, Schwerzstr. 42, D-70593 Stuttgart, Phone: +49 711 459-22908, Fax: +49 711 459-23288, E-Mail: buettgen@uni-hohenheim.de

Editorial Board: Prof. Dr. Dr. h.c. mult. Manfred Bruhn, University of Basel, Prof. Dr. Andreas Eggert, Paderborn University, Prof. Heiner Evanschitzky, Alliance Manchester Business School, Prof. Dr. Christiane Hipp, Brandenburg University of Technology, Prof. Dr. Joachim Hüffmeier, TU Dortmund University, Prof. Dr. Helmut Krcmar, Technical University of Munich, Prof. Dr. Martin Matzner, Friedrich-Alexander University Erlangen-Nürnberg, Prof. Dr. Friedemann W. Nerdinger, University of Rostock.

Manuscripts: We ask all authors who would like to submit a paper to use our submission system: https://www.openconf.org/smr. Neither the publisher nor the editors assume any liability for unsolicited manuscripts. The accteptance of a contribution has to be in writing.

Copyright: Upon acceptance for publication the author transfers to the Nomos Verlagsgesellschaft mbH & Co. KG the exclusive copy right of his or her contribution for the duration of the copyright as laid down by law. The copyright covers the exclusive right and licence to reproduce, publish, distribute and archive the article in all forms and media of expression now known or developed in the future, including reprints, translations, photographic reproductions, microform, electronic form (offline and online) or any other reproduction of similar nature. The author's second window right after the expiry of 12 months after first publication, as laid down in article 38/4) German Copyright Law, remains unaffected. All articles published in this journal are protected by copyright law. Without first obtaining permission from the publisher, no material published in this journal may be reproduced, distributed, performed or displayed publicly, or made accessible or stored in electronic databases or reproduced, distributed or utilized electronically, outside the narrow limitations of copyright law.

Publisher: Nomos Verlagsgesellschaft mbH & Co. KG, Postfach 100 310, D-76484 Baden-Baden, Tel.: +49 7221 2104-0, Fax: +49 7221 2104-27, E-Mail: nomos@nomos.de

Subscription: An annual subscription to the journal comprises four issues.

Subscription Rates 2022: 219,00 EUR (VAT incl.) annual subscription rate (print and online), campus licence (print and online) 399,00 EUR (VAT incl.). Single issue (print only) 61,00 EUR (VAT incl.), shipping charges have to be added to the rates. Subscription and rate include print issue and a licence for the online archive. The components cannot be cancelled separately. Complaints about copies not received must be lodged within 6 weeks starting at the end of the quarter.

Subscription Service: Please order with either the publisher or any book shop.

Customer Service: Phone: +49 7221 2104-666, Fax: +49 7221 2104-39, E-Mail: zeitschriften@nomos.de

Cancellation: The subscription may be cancelled in writing 3 months before the end of a calendar year.

Citation: SMR – Journal of Service Management Research, number of volume (number of issue), year, page.

https://doi.org/10.5771/2511-8676-2022-2-118 - Generiert durch IP 87.77.209.166, am 28.04.2026, 14:05:37. © Urheberrechtlich geschützter Inhalt. Ohne gesonderte Erlaubnis ist jede urheberrechtliche Nutzung untersagt, insbesondere die Nutzung des Inhalts im Zusammenhang mit, für oder in KI-Systemen, KI-Modellen oder Generativen Sprachmodellen.