

FRONTLINE HUMAN CAPITAL AND CONSUMER DISSATISFACTION: EVIDENCE FROM THE U.S. AIRLINE INDUSTRY

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ABSTRACT

Drawing on a decade-long panel dataset on the U.S. airline industry, we find an inverted U-shaped relationship between frontline human capital expenses and consumer dissatisfaction. As an organization's frontline human capital expenses grow, consumer dissatisfaction initially increases until a threshold is crossed, after which greater frontline human capital expenses lead to fewer subsequent consumer complaints. Our analysis also finds that when experienced frontline workers leave the organization, the results show an increase in dissatisfaction among customers. Our study also informs how changes in frontline human capital expenses are associated with changes in complementary strategies and circumstances. Specifically, we find that greater investments in frontline workers leads to fewer consumer complaints when an organization has a differentiated business model, lower advertising expenditures, and after an exogenous event that negatively affects the focal industry, such as 9/11.

INTRODUCTION

The COVID-19 pandemic has brought about the worst public health crisis in at least a century and has devastated almost every aspect of the service-oriented travel and hospitality sectors (Donthu and Gustafsson 2020). The airline industry is one of the hardest hit, with airlines forced to ground several thousand expensive airplanes, cut their flight schedules by more than half, and eliminate nearly 100,000 jobs. As one example, the crisis forced Southwest Airlines to announce plans for its first round of layoffs in the company's 49-year history. This response put more than 6,800 employees, many of them frontline workers, at risk of losing their jobs in 2021. This action comes from a company well-known for its "people-first" approach, long lauded for its strong workplace culture and engaged workforce (Forbes 2017; 2020). While such unanticipated major events limit top management's ability to avoid frontline employee layoffs and furloughs, it brings to light the value of having a more nuanced understanding of frontline human capital investment. Specifically, it highlights the value of understanding the relationship between frontline human capital investments and consumer responses to varying levels of these investments. The current research examines this relationship and how other strategic decisions influence this relationship.

Frontline human capital (FHC) has been defined as the collective knowledge, skills, and abilities of an organization's workers who provide an essential service through direct

communication and interaction with consumers (Barney and Wright 1998; Ma and Dubé 2011; Matthews et al. 2020; Singh 2000). The importance of frontline employees to a service organization is undeniable. The frontline employee is in the trenches, handling problems, overcoming obstacles, and representing the organization's brand. They are the face of the brand, and they represent the firm's values. Frontline employees have a critical impact on consumer advocacy (Celuch, Walz, and Hartman 2018) and consumer satisfaction (Saxby, Celuch, and Walz 2015), and they play a vital role in the service-profit chain (Anderson and Mittal 2000; Heskett, et al. 1994). As such, hiring and training of frontline employees is a top priority for organizations.

Hiring and training frontline employees is not an instant process - it is a never-ending learning curve. While frontline staff often need to be trained differently than other members of the organization, these employees can frequently be overlooked from a developmental perspective. They can be regarded as expenses to be controlled, rather than viewed as assets to be developed (Jackson and Sirianni 2009). Viewing frontline employees as such is a particularly prevalent approach in times of unanticipated shocks to an industry. Thus, it is imperative that scholarly research provides insights and guidance regarding the impact of frontline human capital (FHC) investments on consumer responses to service providers. The critical relationship between FHC investments and consumer dissatisfaction is an insufficiently studied topic in the literature, and it is a topic of great importance to firms in the service economy (Greer, Lusch, and Hitt 2017). This, in a nutshell, is the focus of the current research.

Drawing on the resource-based view and human capital literature (Coff 1997; 1999), this study examines the complex relationship between FHC investments and consumer dissatisfaction. The current research contributes to our knowledge by broadening our understanding of this relationship in three specific ways.

First, the resource-based view assumes "the more, the better" approach (Barney 1991; Hitt et al. 2001; Kor and Leblebici 2005; Peteraf 1993), with studies showing a direct and positive relationship between FHC and consumer satisfaction (Ma and Dubé 2011; Marinova, Ye, and Singh 2008). However, some evidence in extant research shows that resource investments exhibit diminishing returns beyond a certain threshold (Garcia-Castro and Francoeur 2016; Mishina, Pollock, and Porac 2004; Rothaermel and Boeker 2008). Unfortunately, due to the relatively weak theoretical explanations and insufficient empirical testing of non-linear relationships, some view these prior findings as inconclusive and, at times, contradictory (Haans, Pieters, and He 2016). As such, studying the relationship between FHC investments and consumer dissatisfaction provides a theoretical and empirical way to contribute to the field of research investigating this assumption that "more is better." The current research identifies an inverted-U shaped relationship between FHC investments and consumer dissatisfaction. Using airline industry data, this research finds that initial increases in frontline employee investments are associated with more consumer dissatisfaction until these investments cross a certain threshold, beyond which they start to reduce consumer dissatisfaction.

Second, this research posits human capital literature as a theoretical lens through which to understand how the management of FHC resources affects the dynamic employee-customer relationship (Barney and Wright 1998; Campbell, Coff, and Kryscynski 2012; Coff 1997; Coff and Kryscynski 2011). While resource investment is important for realizing value creation potential (Kor and Mahoney 2005; Mahoney and Pandian 1992; Sirmon and Hitt 2009), not all human capital resources are the same. Frontline employees require more job-specific training and time to develop their firm-specific and customer support skills before they start making a sufficient positive impact on consumers (Becker 1964; Cappelli 2008; Lepak and Snell 1999). The current

research builds upon this body of literature to explain the inverted-U shaped relationship between FHC investments and consumer dissatisfaction. In doing so, it provides managers a new way to understand and evaluate the impact of strategic, often difficult, FHC investment decisions.

Third, extant literature has called for more integrative research identifying contingency factors that could better explain the relationship between FHC investments and consumer perceptions and satisfaction (Srivastava, Fahey, and Christensen 2001; Tantaló and Priem 2016; Ye, Priem, and Alshwer 2012; Zollo, Minoja, and Coda 2018; Celuch, Walz, and Hartman 2018). The current research contributes to these calls by developing a contingency framework examining the moderating role of organizational factors (differentiation and advertising) and exogenous events (9/11) on consumer dissatisfaction. Empirical tests using a longitudinal sample of quarterly data from 1997 to 2006 in the U.S. airline industry confirm most hypotheses and provide implications for researchers and practitioners alike.

LITERATURE REVIEW AND HYPOTHESES

An organization's FHC plays an important customer-facing role. Investing in and developing a firm's frontline capability (Coff 1997; Dierickx and Cool 1989) is critical to ensuring that these employees deliver quality service (Bapna et al. 2013; Rynes, Gerhart, and Minette 2004), thus positively impacting consumers' perception and satisfaction with the firm (Liao and Chuang 2004; Parasuraman, Zeithaml, and Berry 1985). With proper investments in training and career growth, frontline employees have shown to be adept in transforming and updating a firm's knowledge and improving productivity and service quality, thereby positively impacting consumer satisfaction (McGregor and Doshi, 2018; Saxby et al. 2015; Ye, Marinova, and Singh 2012). Further, research shows that a frontline worker's authenticity and perceived effort leads to trust and satisfaction among consumers, leading to a virtuous cycle (Matthews et al. 2020; Mohr and Bitner 1995). Such findings reiterate the critical nature of FHC investments, development, and growth.

An organization's FHC typically comprises both inexperienced and experienced workers. Inexperienced workers learn their tasks through a combination of firm-sponsored training programs and on-the-job training. A firm spends time and resources on these less experienced employees to develop their general skills as well as firm-specific skills (Becker 1964). Thus, while inexperienced frontline employees tend to make mistakes during the initial phase of their employment, they learn and develop over time, becoming more valuable (Bidwell and Briscoe 2010; Chattopadhyay and Choudhury 2017). As such, consistent and ongoing internal training is considered a necessity to develop firm-specific human capital, despite the associated costs. To balance these costs, firms tend to compensate inexperienced workers with limited skills at a market discount during the employee's initial years (Schultz 1961; Cappelli 2008).

Inexperienced frontline employees can also bring in novelty, enthusiasm, and a strong desire to succeed (Rynes, Orlitzky, and Bretz 1997). Although they may not be capable of addressing root causes of consumer complaints or chronic issues initially, this enthusiasm along with firm-specific and on-the-job training helps them learn to perform roles within the organizational system and helps them build their professional capacity. As employees gain tenure, they are more likely to learn how to work within and improve service systems (Bower and Hilgard 1981; Grant 1996), becoming more effective and capable of generating a positive impact (Shaw and Lazear 2008). However, until that point is reached, they are likely limited in their capacity to reduce consumer dissatisfaction.

A more experienced and tenured frontline workforce will command higher wages as well as bring about higher value to the organization and its consumers. This is particularly true if a firm brings in experienced frontline workers from the outside. Often, market trends and industry practices dictate that if an organization attracts lateral workers, it does so with much higher salaries than if it develops workers internally to the same experience level (Bidwell 2011; DeVaro, Kauhanen, and Valmari 2019; Hong 2020; Marinova et al. 2008). This apparent disparity in wages among workers with similar experience (Cappelli 2008; Campbell et al. 2012) could potentially lead to a lack of motivation, dissatisfaction, and turnover among internally developed employees, which, in turn, might quickly manifest in consumer dissatisfaction (Brown and Peterson 1993). Further, given the premium that firms in the service sector attach to firm-specific norms, culture, and experience, hiring from the outside a more educated and/or a more qualified frontline workforce does not necessarily reduce the need for human capital investments in training and development. This line of argument further reiterates the need for initial and ongoing investments in frontline human capital in terms of hiring, training, and career development prior to a firm being able to recognize positive employee performance and reap the benefits of such investments in the form of a reduction in consumer dissatisfaction and complaints. This leads us to hypothesize that:

H1: *Organizational investments in frontline human capital (FHC) exhibit an inverted U-Shaped relationship with consumer dissatisfaction (complaints). In other words, consumer dissatisfaction (complaints) increases with increases in frontline employee investments till the investments reach a threshold (employee experience threshold), beyond which increases in FHC investments result in a decrease in consumer dissatisfaction (complaints).*

An organization's FHC resources may differentially impact customers depending on complementary strategies that surround that resource (Kor and Mahoney 2005; Mannor, Shamsie, and Conlon 2016; Riley, Michael, and Mahoney 2017; Vomberg, Homburg, and Bornemann 2015). In the next sections, we explain two such strategies which can act as moderators. First, we consider an organization's business model, which illustrates how an organization creates, delivers, and captures value. Second, we consider advertising investments, which represent brand-specific expectations and evaluations influenced through advertisements. Finally, we examine a third moderator to show how an exogenous jolt to the industry can moderate the relationship between FHC investments and consumer dissatisfaction through its impact on consumers' evaluations and frontline employees' work.

Business Models

A firm's business model is defined as how a firm interacts with consumers based on their product market (Zott and Amit 2008). Two typical business model strategies are a cost leadership strategy and a differentiation strategy (Mittal, Anderson, Seyrak, and Tadikamala 2005). Cost leadership business models are designed to provide basic services that other firms provide but in a more cost-effective way, focusing on transaction efficiency through reliability and simplicity (Porter 1985). In contrast, a differentiation business model is designed to provide augmented service offerings, reaching beyond the basic service elements that might be expected in an industry by seeking new ways to connect and conduct economic exchanges with consumers (Anderson, Fornell, and Rust 1997; Rust, Moorman, and Dickson 2002). Additionally, a differentiation business model likely requires greater breadth, variety, and complexity of resources than a cost-

leadership business model. Essentially, business models provide a system for how to deploy resources to enable transactions with consumers (Schmidt, Makadok, and Keil 2016; Zott and Amit 2008).

Firms adopting a differentiation model typically have higher resource investments to deliver value for the target consumer segment. In a service context, a firm's human capital resources are closely connected to their ability to consistently deliver the quality of service which consumers expect. If the firm is pursuing a differentiation business model, it will typically have broader and more complex operating activities designed to best accommodate consumer preferences (Fornell 1992). Thus, enhanced skills are needed by employees, and complementary resources and equipment are provided to deal with idiosyncratic situations and making quick decisions. Further, creating customized service for consumers requires employees to ascertain varying consumer needs, decide on the procedures required to fulfill those specific needs, and finally choose the most appropriate path to create and deliver those needs (Shostack 1987; Tansik 1990). Such service customization requirements will be positively related to human capital investments (Skaggs and Youndt 2004).

In the airline industry, it is crucial to distinguish between full-service legacy carriers and low-cost carriers, since ignoring the competitive effects between these two carrier types can lead to overestimation of service reliability levels (Zhou, Albuquerque, and Grewal 2021). Unlike low-cost carriers, legacy carriers can extract more economic rents from customers who have a higher willingness-to-pay (Baker 2013), attributed, for example, to elaborate loyalty and customer service programs that necessitates extra employees to provide more personalized service.

For firms pursuing a cost-oriented business model, customers may perceive that they are required to expend some effort on their own as part of the co-production process (Bendapudi and Leone 2003; Mills and Morris 1986; Skaggs and Youndt 2004). For an airline, this reduces the breadth of potential demands customers may impose on the firm (Skaggs and Youndt 2004). For example, Southwest Airlines was amongst the first low-cost carriers to position themselves in a manner that requires customer effort (e.g., customers must book on their website since the airline lacked an integrated reservation system with other airlines, and on-flight there are no assigned seats so customers must decide on an available seat while boarded on the aircraft). This effort is an indirect cost passed on to consumers. In cost-oriented business models, less tenured employees or fewer employees may be sufficiently able to deliver expected services. Additionally, customer expectations and perceptions of service quality may be lower given the lower ticket prices for essential services (Hartline and Ferrell 1996; Maxham and Netemeyer 2003). This leads us to hypothesize that:

H2: *The inverted U-shaped relationship between frontline human capital investment and consumer dissatisfaction is more pronounced in firms adopting a differentiation-oriented business model as compared to firms adopting a low-cost business model.*

Marketing Resources

The use of marketing resources can lead to superior consumer satisfaction, improved customer retention, and stronger brand loyalty (Hanssens, Rust, and Srivastava 2009; O'Sullivan and Abela 2007; Srivastava et al. 2001). Extant research has shown that advertising is an important signal of a firm's marketing capabilities (Joshi and Hanssens 2010; Kim and McAlister 2011) because it exerts a positive influence on a consumer's thoughts, feelings, knowledge, and behavior

about the firm's brand (O'Sullivan and Abela 2007). This, in turn, enhances the consumer's loyalty as well as its expectations of the quality of the brand at the time of interaction (McAlister, Srinivasan, and Kim 2007; Mehta, Chen, and Narasimhan 2008; Parasuraman et al. 1985).

Frontline human capital play an important role in marketing (Moorman and Day 2016). For example, frontline employees are typically responsible for providing a positive customer experience through aligning with and exceeding consumer expectations about the authenticity of the firm's brand (Morhart, Herzog, and Tomczak 2009; Sirianni et al. 2013). As such, firms should recruit, select, train, and (financially) motivate these frontline workers to perform their customer service roles in a manner that showcases the firm's brand personality (Sirianni et al. 2013). It is also important for frontline employees to be equipped to demonstrate the benevolence and competence consumers expect (Celuch et al 2018). In this sense, human capital resources may also be considered a type of marketing capability in which human capital is responsible for managing the consumer relationship and experience (Hartline Maxham, and McKee 2000; Kamakura et al. 2002).

Following this logic, firms that invest in both advertising and human capital can create a positive interactive effect on consumers (Vomberg et al. 2015). Advertising sets up the positive expectation of the brand, frontline workers identify with and support the brand promise, and this leads to supportive attitudes and motivates frontline workers who not only meet but exceed the firm's service goals (Vomberg et al. 2015). For example, in the airline context, Lufthansa's advertising campaign in India, "More Indian than you think," sets up an expectation of friendliness and hospitality by the flight attendants and frontline employees at the check-in counter. When that expectation is confirmed by the consumer's experience and the frontline worker's effort, it results in an increase in consumer satisfaction. The challenge for frontline workers is to meet both the consumer's and the brand's perceived expectations by providing excellent customer services as described in the advertisements. Thus, we predict that as firms invest more in advertising, FHC investments will reach the threshold for reducing consumer complaints sooner. This leads us to hypothesize that:

H3: *Investments in advertising positively moderates the inverted U-shaped frontline human capital investment-consumer dissatisfaction relationship, such that, firms that invest more in advertising are more likely to reduce consumer dissatisfaction sooner (i.e., will reach the experience threshold earlier) with an increase in frontline human capital investments.*

Exogenous Shock

We argue that exogenous events that negatively impact an industry will positively moderate the inverted U-shaped relationship that we hypothesize. In this study, 9/11 is considered the exogenous event that had a major negative impact on the airline travel industry. After 9/11, the US government federalized security screening services in all US airports, placing the Transportation Security Administration (TSA) in charge of passenger screening operations. This was done to instill greater trust in the safety of air travel and to subsequently limit the expected drop in overall demand for air travel (Ito and Lee 2005). While this change improved security practices, it also added costs to consumers in the form of greater inconvenience. Studies about this change indicate consumer willingness to accept the added cost in exchange for feeling more secure (Klenka 2019). This points to overall higher prioritization for safety relative to other service factors

following 9/11, thus reducing the relative priority of other expected service factors and suppressing the rate of consumer complaints in other airline service areas post 9/11.

Attribution theory (Folkes 1988) helps to further explain how the additional focus on safety and the TSA takeover of screening post 9/11 causes this exogenous event to moderate the inverted U-shaped relationship under investigation. According to attribution theory, how consumers ascribe the cause of a service failure can influence the consequences they pursue (Folkes 1988). The link between perceived causes and consequences can vary based on locus, who should solve a problem, whether the event was controllable by the firm, who has control over an outcome, and how permanent the cause of a problem is (Folkes 1988). Following 9/11, consumers see a much greater role of the TSA in their travel experience and experience related changes to checking in and handling of bags. We posit that, in the years following 9/11, consumers are more likely to ascribe some problems as being out of the control of the airline or of a specific frontline employee. Consumers may also increasingly believe that airlines and their employees, alone, are not able to solve many of problems that occur. Research in other areas indicates the less consumers deem a failure to be the fault of the service provider, the less they feel that they deserve a recovery (Harris, Mohr, and Bernhardt 2006), and this may reduce their frequency of complaining. As such, the way in which an exogenous event impacts consumers' perception of frontline employees' control and culpability of problems is one factor moderating the relationship between investments in frontline human capital and consumer complaining behavior.

Additionally, an exogenous event can drastically and rapidly change frontline employees' jobs. For example, in a 2001 letter to shareholders, Southwest Airlines reported that new FAA and DOT security directives profoundly changed processes related to customers, luggage, and airplanes, compelling "probably 1,000,000 airline employees to learn, and apply, new security procedures on a daily and, sometimes, hourly basis" (Southwest Airlines Co. 2002, p. 2). This exemplifies how exogenous events can directly impact frontline employees' job complexity and require greater communications and investments from organizations to clarify expectations and to train employees. We argue that firms with greater investments in frontline workers will be more effective in reducing customer complaints in times of tumultuous exogenous events because the investments support maintaining experienced frontline employees and supporting needed training during times of change. This expectation follows from extant research supporting the positive impact explicit communications and training have on frontline employee service behavior (Lings, Beatson, and Gudergan 2008). This leads us to hypothesize that:

H4: *An exogenous event, such as 9/11, that negatively impacts an industry will positively moderate the inverted U-shaped human capital investment-consumer dissatisfaction relationship such that, continued investment in frontline human capital will result in earlier benefits in addressing consumer dissatisfaction.*

DATA AND RESEARCH METHODOLOGY

We use a longitudinal dataset from the airline industry to study the impact of frontline human capital investments on consumer dissatisfaction. The airline industry has been commonly used to study customer behavior and satisfaction levels since it is often characterized by low consumer loyalty, low switching costs, and frequent service failures (Lapr e and Tsikriktsis 2006; Luo, 2007; Mellat-Parast et al. 2015). The airline industry is also characterized by low barriers to entry, high price competition and rivalry, high bargaining power of duopoly suppliers like Boeing and Airbus, and a high number of transportation substitutes leading the industry to be highly

unattractive (Porter, 1985). Providing exceptional customer service is critical not only to gain customers, but more importantly, to not lose customers to rivals or substitutes.

Airline service providers typically have multiple points of contact and face-to-face interactions with passengers, from booking a ticket to interacting in the airport and on the flight. If passengers have a bad experience in any of these interactions, it could lead to the permanent loss of future business from that passenger. Passengers can face increasing levels of dissatisfaction if an airline fails to invest in sufficient staffing, training, and support for their consumer service personnel, making the airline industry a suitable and appropriate context for this research.

Sample

We collected airline data from the U.S. Department of Transportation (DOT), COMPUSTAT, and the Center for Research in Security Prices (CRSP) to develop our database. Large air carriers are legally mandated to provide a detailed quarterly report of their financial and operating data to the Bureau of Transportation Statistics (BTS), a division of the DOT. These large airlines report expenditures by specific categories, such as the functional role of employees. This allows us to separate salaries and expenses for frontline employees, our key variable of interest, from those of other human capital resources such as pilots, engineers, and executives. We can also specifically capture advertising and promotion expenditures directed towards passengers and reservations distinct from those targeted towards cargo revenue.

Airlines are designated as large if they have total operating revenues of at least \$1B, they represent at least 1% of the total domestic scheduled-service passenger revenues, and they operate aircraft with a passenger capacity of more than sixty seats. The airlines

¹ in our sample are Alaska Airlines, America West Airlines, American Airlines, Continental Airlines, Delta Air Lines, JetBlue Airways, Northwest Airlines, Southwest Airlines, Trans World Airlines (TWA), United Airlines, and US Airways. While some airlines have some international exposure, we only study the domestic operations of the airlines. Collectively, the eleven U.S. airlines in our sample account for over 95% of total industry revenues during the period of this study.

Two airline mergers were observed in our sample. America West merged with U.S. Airways in the third quarter of 2005, and TWA merged with American Airlines in the first quarter of 2002. The resulting merged firms were coded as a new firm to control for organization size and culture changes that typically follow large mergers or acquisitions. Our final sample consisted of 13 firms and 312 airline-quarter observations from 1997 to 2006.

Operationalization of Constructs

Consumer Complaints. To capture consumer dissatisfaction, we use the aggregate rate of actual third-party complaints per 100,000 passengers in a quarter. Dissatisfaction and complaining behavior are distinct but closely related constructs. In simple terms, a consumer is dissatisfied when they are unhappy about one or more aspects of the service or when service expectations are not met. Consumer dissatisfaction can lead to a private response, such as boycotting the service provider in the future, or vocal responses, such as complaining to the focal organization, to friends or other customers, or to a third party (Singh and Wilkes 1996). Sing and Wilkes (1996) find that consumers are more likely to engage in third party complaining when experiencing a higher intensity of dissatisfaction and when the service problem is of greater consequence. Following this

¹ Due to its relatively smaller size, JetBlue did not enter our sample until the 2nd quarter of 2005.

line of reasoning, we posit that third party consumer complaints, such as those in our data set, represent occurrences of high degrees of dissatisfaction. As such, it is plausible that they underestimate the total instances of consumer dissatisfaction for each airline. The passenger complaints in this data set are registered with the Air Traffic Consumer Report (ATCR), published monthly by the DOT, and are used in extant research (Lapr e and Tsikriktsis 2006; Luo 2007; Singh 1988). Complaints in this data set cover a broad range of potential service failures, including flight cancellations or delays, oversold flights, ticketing or reservation issues, problems obtaining refunds for lost tickets, missing claims for lost or delayed baggage, customer service problems such as treatment of passengers and civil rights offenses, misleading advertising, and frequent flyer problems.

Frontline Worker Salary Expenses. We calculate frontline human capital investments by capturing the expenses of employees who are directly in contact or responsible for serving passengers. The frontline employees included in this variable are flight attendants, ticket counter and gate personnel, reservation and ticketing personnel, baggage handling personnel, and consumer service managers. The expenses of these workers include compensation, training, and tools necessary to allow employees to perform their jobs. This variable excludes expenses for non-frontline employees, such as transportation and operations personnel, which includes engineers, plane maintenance crews, and executives. While pilots have overall control of the plane and responsibility for passengers, they were not considered part of frontline human capital since they typically have low direct interaction with passengers, typically delegating responsibilities to others.

Differentiated Business Model. The Bureau of Transportation Statistics defines airline business models as being regional, low-cost, or legacy. We operationalize the business model variable as cost-oriented if the airline is classified by the Bureau as low-cost (variable equals zero) and as differentiated if the airline is classified as legacy by the Bureau (variable equal 1). America West, JetBlue, and Southwest represent efficiency-driven business models targeting low-cost product markets. The other eight airlines in our sample represent novelty-driven legacy business models because they offer more services. Legacy business models are, by nature, more complex to operate given their heterogeneity of routes, serving both long and short segments, and consequently, their greater variety of aircraft models¹ (Haunschild and Sullivan 2002). Legacy carriers are also characterized by union wages and an older workforce compared to low-cost carriers.

Advertising Expenses. The DOT federally mandates that airlines report advertising and publicity expenditures that are directly assignable to passengers. According to the DOT guidelines, this measure accounts only for expenses incurred in creating public preference for the air carrier and its services. The measure includes the costs of, for example, radio and print advertisements but does not include expenses such as sales solicitation assignable to cargo transportation. From our measure, we capture advertising and promotions directed towards consumers that have the potential to increase future business, and therefore these expenses are investments by the firm.

Post-9/11 Dummy. We include variable for the tragic events of September 11, 2001, in which the variable equals one starting the third quarter of 2001 till the end of the sample. Given the COVID-19 crises, we want to draw similarities to previous events and their impact on airline travel and consumer dissatisfaction. Due to the 9/11 shock, there was a significant drop in consumer complaints for several years following this tragic event.

¹ In our sample, legacy carriers had more than seven aircraft models, whereas low-cost carriers had six or fewer, except for Alaska Airlines.

Control Variables. We include both year dummies to control for year-specific events and quarter dummies to control for seasonal differences, such as crowded holiday and summer vacation travel. We also control for several variables that can influence consumer complaints. First, we include the Number of Frontline Workers to capture firm size and define this as the annual count of full-time flight attendants, ground and ramp personnel, and others. The greater number of these workers, the more they can work towards tending to passengers and reducing potential complaints. While we control for the number of frontline workers, our analysis focuses on how investments in frontline human capital relate to consumer complaints.

Some of the airlines in our sample, such as Delta, Northwest, United, and US Air, filed for Chapter 11 bankruptcy, mostly in the last four years of our sample. The quality of their service may be different around this time (Phillips and Sertsios 2013). As such, a Bankruptcy Dummy captures the two quarters before, time during, and two quarters after the airline is under bankruptcy. We also control for Operating Expenses of an airline, defined as the total expenses incurred in the performance of air transportation, such as traffic, transport, sales, and servicing. Revenue passenger miles, an industry metric that shows the number of miles travelled by paying passengers, is highly correlated with operating expenses (0.9), but the results are similar with either of the variables. We separately control for Fuel Expenses since these changed dramatically during this time-period for all flights and aircraft types in domestic operations. Consumer complaints can also be impacted by Ticket Prices, calculated as the average fare price per quarter, and On Time Performance, calculated as a percentage of flights arriving on time per quarter. Finally, we include a control for the annual Number of Trainers for attendants, engineers, pilots, reservations, sales, stewards, and ticketing, since the more the trainers, the less potential for complaints. Please see Table 1 for a summary of the variables, measures, and sources, and Table 2 for the raw descriptive statistics (means and standard deviation) and correlations between the variables.

Model Specification and Estimation

Our small sample of thirteen airlines consists of correlated longitudinal data, where each airline accounts for multiple airline-quarter observations. Our analysis is within-firm, but correlations must be controlled in order to obtain unbiased coefficient estimates (Ballinger 2004). In Table 2, we see that there is high correlation between frontline worker salaries, our core independent variable, and other control variables such as frontline worker count, operating expenses, and fuel expenses. Therefore, as suggested by Echambadi, Campbell, and Agarwal (2006), we used mixed models to control for the correlations in the model with the following specification:

$$Y_{i,t} = \beta X_{i,t} + b_i Z_i + \epsilon_{i,t}, \text{ where } b_i \sim Nq(0, \Psi) \text{ and } \epsilon_{i,j} \sim NN(0, \sigma^2 \Lambda_{i,t}).$$

$Y_{i,t}$ represents the dependent variable of airline i for quarter t . $X_{i,t}$ is the $N \times p$ model matrix corresponding to the fixed effects, and β is the $p \times 1$ vector of fixed-effect coefficients. Z_i is the $N \times q$ model matrix that represents the airline-specific heterogeneity using a random effects specification. $\epsilon_{i,t}$ is the $N \times 1$ vector of errors for each observation. Ψ represents the $q \times q$ unstructured covariance matrix for the airline random effects. The intercept could vary across airlines. Finally, $\sigma^2 \Lambda_{i,t}$ is the $N \times N$ covariance matrix for the errors. We estimate these mixed effect models using restricted maximum likelihood estimation method. Given the skewed raw values of the continuous variables, we employ a log-log functional form for a non-binary variable, and to reduce endogeneity concerns, we lag all the explanatory variables by one quarter.

Table 1
Variables, measures, and sources

Variables	Measure	Source
<u>Dependent Variable</u>		
Consumer Complaints	Consumer complaints registered per 100,000 passengers flown, such as flight problems, oversales, reservations, customer service, and baggage service	DOT (ATCR)
<u>Independent Variable</u>		
Frontline Worker Salary Expenses	Compensation and other expenses of flight attendants, ground and ramp personnel, ticketing, baggage handlers, and salespeople who are directly responsible for consumers	DOT (P6, Form 41)
<u>Moderator Variables</u>		
Differentiated Business	Binary variable with differentiated/legacy carrier (=1) and cost-oriented/low-cost carrier (=0)	DOT (RITA)
Advertising Expenses	Expenses incurred in creating public preference for the air carrier and its services directly assignable to passengers	DOT (P7, Form 41)
9/11 Dummy	Binary variable with pre-9/11 (=0) and post-9/11 (=1) which starts in the third quarter of 2001	
<u>Control Variables</u>		
Number of Frontline Workers	Annual count of full-time frontline workers, such as flight attendants, ground and ramp personnel, and others	DOT (P10, Form 41)
Bankruptcy Dummy	Equals one for the two quarters before, time during, and two quarters after an airline is in bankruptcy	CRSP
Operating Expenses	Expenses incurred in the performance of air transportation, such as traffic, transport, sales, servicing, etc.	DOT (P52, Form 41)
Fuel Expenses	Expenses for fuel across all flights and aircraft types in domestic operations	DOT (P52, Form 41)
Ticket Price	Average itinerary price per airline-quarter calculated as sum of itinerary fares divided by count of tickets from segments	DOT (DB1B)
On Time Performance	Percentage of overall flights arriving on time per airline for a given quarter	DOT (Table 1A)
Number of Trainers	Annual count of trainers for attendants, engineers, pilots, reservations, sales, stewards, and ticketing	DOT (P10, Form 41)
Fixed Effects	Dummy variables for quarter, years, and airlines	

All non-binary variables are transformed into logarithm prior to inclusion in the empirical models.

Table 2

Descriptive statistics and bivariate correlations

Variables	M	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) Consumer Complaints	0.156	0.801											
(2) Frontline Salary Expenses	12.473	0.839	0.02										
(3) Differentiated Business	0.795	0.404	0.39	0.40									
(4) Advertising Expenses	9.306	1.195	-0.23	0.58	0.04								
(5) 9/11 Dummy	0.519	0.500	-0.50	0.05	-0.06	0.03							
(6) Frontline Workers	9.757	0.722	0.05	0.93	0.35	0.54	-0.01						
(7) Bankruptcy Dummy	0.122	0.328	-0.05	0.11	0.20	0.05	0.36	0.12					
(8) Operating Expenses	14.191	0.706	0.10	0.95	0.42	0.55	0.14	0.91	0.24				
(9) Fuel Expenses	12.155	0.742	-0.10	0.81	0.23	0.52	0.33	0.78	0.27	0.89			
(10) Ticket Price	5.967	0.215	0.58	0.40	0.74	0.03	-0.11	0.42	0.09	0.49	0.34		
(11) On Time Performance	4.344	0.074	-0.39	0.23	-0.07	0.05	0.33	0.23	0.13	0.19	0.15	-0.15	
(12) Number of Trainers	5.218	0.902	0.33	0.54	0.55	0.08	0.05	0.46	0.12	0.59	0.44	0.53	0.07

RESULTS

Table 3 shows the results of frontline worker salaries and expenses on consumer complaints. Column 1 includes the control variables, in which we see that an airline has fewer passenger complaints when they increase their employment of frontline workers and have better on time arrival performance. The direct effect of our 9/11 dummy variable shows that post-9/11, passengers were less likely to formally complain about a U.S. airline, consistent with the positive sentiment towards airlines after the tragic event. Finally, airlines with a differentiated business model were more likely to register passenger complaints, likely due to the shortfall in service expectations compared to low-cost airlines.

Hypothesis 1 proposes an inverted U-shaped relationship between frontline employee investments and consumer complaints, and we find support for this relationship in Column 2. Next, we test our moderated non-linear relationships. Interpretation of these moderated relationships can be challenging since it depends on the statistical significance of the additive effect for the coefficients of frontline salaries, its square term, and the interaction of these expenses with the moderator and the square term. Thus, we graph our moderated interactions in order to better interpret our findings. Hypothesis 2 posits that greater employee investments matter more for airlines with a differentiated business model, and we find support for this relationship in Column 3. In the first graph under Figure 1, we find that the differentiated business model dotted line has the relatively same inverted-U shaped relationship, but that the turning point occurs sooner compared to the main effect.

Hypothesis 3 predicts that consumer dissatisfaction will be lower from the multiplicative effect of frontline and advertising expenses, but we find support for the opposite claim (see Column 4 in Table 3). In the second graph of Figure 1, we see the multiplicative effect follows for low advertising and high frontline salaries in that the turning point is sooner. Although organizations that have high (versus low) advertising costs register fewer complaints, any additional frontline salaries do not provide any additional benefit to further reducing passenger complaints. Essentially, we find evidence that these two variables are substitutive in their effect on consumer dissatisfaction.

Finally, Hypothesis 4 predicts that organizations that invest more in their workers post-9/11 will see greater benefits for their consumers. We find statistical support in Column 5. The final graph in Figure 2 shows that while there are generally fewer customer complaints post 9/11, i.e., the solid line has shifted down, greater frontline expenses lead to fewer complaints than pre-9/11, illustrated by the more steeply decreasing solid line after the turning point. Various robustness checks indicate that our model specification is valid, and our findings are consistent. Column 1 in Table 4 shows a full model, and we see that the magnitude of the coefficients and statistical significance are relatively stable ($p < 0.01$). Earlier, we mentioned collinearity between our core independent variables and three other control variables. Although these are necessary to model consumer complaints, we exclude these three highly correlated variables and subsequently found no other collinearity problems after using multiple diagnostics, including variance inflation factors and the condition indices. Further, we ran a model without controls, and our results remain largely the same (see Column 2 in Table 4). We also randomly sampled observations and estimated multiple models from the comprehensive dataset, and the coefficients among different specifications were relatively stable.

Table 3
Mixed-effects estimates for drivers of consumer complaints

	(1) Controls	(2) Hyp. 1	(3) Hyp. 2	(4) Hyp. 3	(5) Hyp. 4
Frontline Salary Expenses		6.068** (0.002)	-0.577 (0.867)	36.74*** (0.000)	4.946* (0.012)
Frontline Salary Expenses Squared		-0.243** (0.002)	0.0424 (0.763)	-1.546*** (0.000)	-0.201** (0.010)
Frontline Salary X Differentiated			10.26* (0.023)		
Frontline Salary Sqr. X Differentiated			-0.435* (0.018)		
Frontline Salary X Advertising				-3.165** (0.005)	
Frontline Salary Sqr. X Advertising				0.134** (0.004)	
Frontline Salary X 9/11					4.551** (0.003)
Frontline Salary Sqr. X 9/11					-0.186** (0.004)
Differentiated Business Model	1.301** (0.002)	1.143* (0.013)	-59.14* (0.033)	1.223** (0.009)	1.126* (0.013)
Advertising Expenses	0.020 (0.351)	0.019 (0.367)	0.017 (0.422)	18.51** (0.007)	0.019 (0.346)
9/11 Dummy	-0.315*** (0.001)	-0.337*** (0.000)	-0.370*** (0.000)	-0.361*** (0.000)	-28.03** (0.003)
Number of Frontline Workers	-0.237* (0.010)	-0.229* (0.013)	-0.249** (0.006)	-0.158† (0.089)	-0.218* (0.016)
Bankruptcy Dummy	-0.017 (0.795)	-0.061 (0.376)	-0.091 (0.185)	-0.097 (0.153)	-0.130† (0.064)
Operating Expenses	-0.151 (0.413)	-0.109 (0.618)	-0.056 (0.800)	-0.169 (0.434)	-0.032 (0.882)
Fuel Expenses	-0.173 (0.152)	-0.263* (0.032)	-0.236† (0.051)	-0.268* (0.025)	-0.191 (0.120)
Ticket Price	-0.262 (0.189)	-0.177 (0.391)	-0.417† (0.055)	-0.335 (0.107)	-0.241 (0.256)
On Time Performance	-0.862*** (0.000)	-0.896*** (0.000)	-0.935*** (0.000)	-0.822*** (0.000)	-0.720** (0.003)
Number of Trainers	0.051 (0.104)	0.016 (0.623)	-0.026 (0.467)	-0.005 (0.887)	0.035 (0.292)
Constant	10.01*** (0.000)	-27.37* (0.023)	12.13 (0.569)	-205.6** (0.001)	-22.34† (0.067)

Table 3 (continued)

Mixed-effects estimates for drivers of consumer complaints

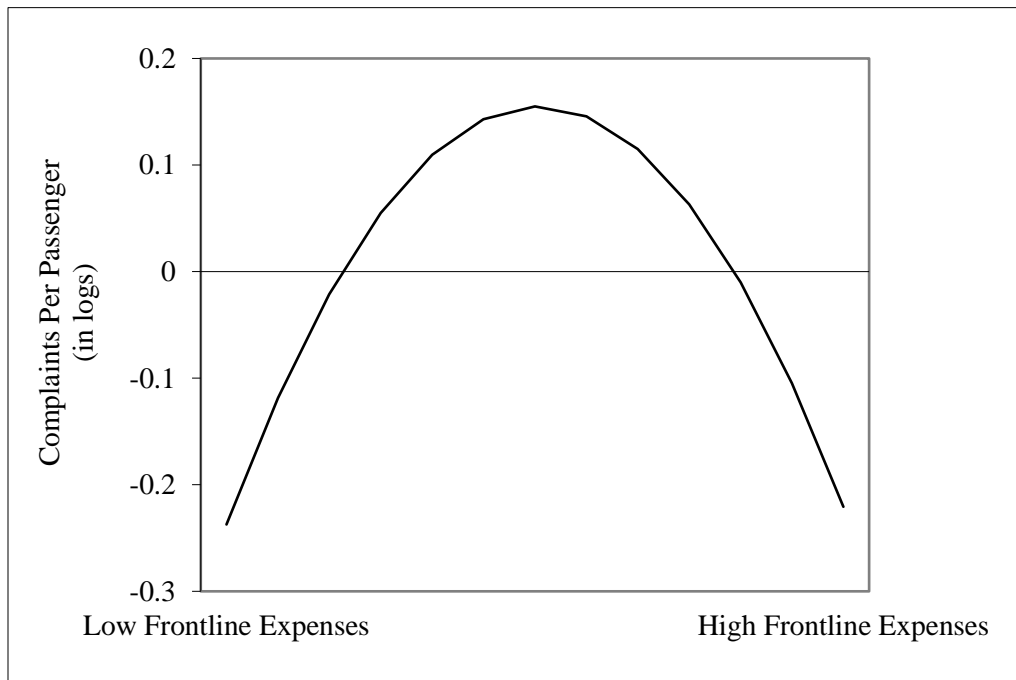
Firm Dummies	YES	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES	YES
Quarter Dummies	YES	YES	YES	YES	YES
Observations	312	312	312	312	312
Firms (No. of Airlines)	13	13	13	13	13
Akaike Information Criterion	128.7	128.1	125.5	128.0	128.5

Exact p-values in parentheses.

† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

Figure 1

Main effect of frontline salary expenses on passenger complaint rate



Note: Low and high values are 1.5 standard deviations above and below the mean values

The Hausman (1978) test shows that random effects are the preferred specification since the coefficients are not statistically different from fixed effects. As another check, in Column 3, we show results from airline fixed effects with OLS in which the model is a significantly better fit given the low AIC value, and the direction and magnitude of the coefficients are relatively similar. The differentiated business model dummy variable drops because its effects are included in the

variables in which the business model interacts and our airline fixed effects. For our last check, we manipulate the dependent variable measured as complaint count normalized by the number of passengers. Instead, we use the raw count of complaints as the dependent variable and control for passenger size. We employ a Poisson mixed effect model with the same variables as before, and our results are slightly stronger and in the same direction. Together, these alternative models provide added support and consistency for our original findings.

DISCUSSION

This research provides a strategic perspective on consumer dissatisfaction and complaint management. In doing so, it also advances the Resource Based View (RBV) of the firm by identifying and theoretically explaining the non-linear relationship between frontline human capital investments and consumer dissatisfaction. This research finds frontline human capital investments do not start to address consumer complaints until they cross a certain threshold. It also finds that differentiated-oriented organizations can benefit from increases in frontline employee investments, sooner. The results indicate that cost-oriented firms may be able to control costs by maintaining lower frontline worker investments, since increased investments do not appear to reduce consumer complaints for these firms in this sample. Contrary to our hypothesized relationship, we find advertising and human capital investments do not necessarily interact, and we attempt to explain this counterintuitive finding later in our discussion. This research also provides evidence of how exogenous events can influence customer complaining behavior in an industry and a way to think about the strategic use of frontline human capital in light of such changes.

The inverted U-shaped relationship between FHC and consumer dissatisfaction has practical implications for organizations. From a strategic planning perspective, it highlights the value of investing in mentorship and training programs to help junior workers advance and balancing these investments with those aimed at maintaining senior workers. As overall investments in frontline employees increase, the organization may not see an immediate decrease in consumer dissatisfaction. However, managers should be encouraged to continue investments in frontline worker retention and development to reach the necessary threshold level which reduces consumer dissatisfaction. Similarly, if an organization's FHC investments are beyond the necessary threshold and it decides to cut costs by reducing investments in frontline workers, our model helps them anticipate the impact of the decision. Specifically, the organization should be mindful of the fact that cutting costs may create a situation where they slide back below the threshold investment level. If this occurs, reinvesting in these resources in the future may not initially result in lower levels of consumer dissatisfaction until level of reinvestment crosses the threshold again.

In addition to monitoring overall FHC investments, such as is investigated, here, a firm's initial onboarding process for FHC can also help address future customer consumer complaint behavior. Management literature highlights how newcomers display heterogeneous socialization experiences and adjustment behavior (Solinger, Van Olffen, Roe, and Hofmans 2013), emphasizing the need for firms to incorporate individual identity socialization and self-authentication within the organizational onboarding process (Cable, Gino, and Stats 2013). Organizations that effectively onboard newcomers on a personal level may benefit from positive job attitudes, individual performance, intention to stay, and customer satisfaction (Bauer, et al. 2007; Cable et al. 2013; Saks, Uggerslev, and Fassina 2007). Overall, research shows properly

Table 4
Robustness checks

	(6) Full	(7) No Controls	(8) OLS FE	(9) Poisson ME
Frontline Salary Expenses	29.53** (0.006)	31.66** (0.002)	29.73** (0.007)	9.199*** (0.000)
Frontline Salary Expenses Squared	-1.258** (0.005)	-1.364** (0.002)	-1.251** (0.006)	-0.373*** (0.000)
Frontline Salary X Differentiated	12.59** (0.004)	13.71*** (0.000)	9.417* (0.039)	4.561** (0.004)
Frontline Salary Sqr. X Differentiated	-0.517** (0.004)	-0.545*** (0.000)	-0.399* (0.031)	-0.232*** (0.000)
Frontline Salary X Advertising	-3.355** (0.003)	-3.924*** (0.000)	-3.084** (0.008)	-0.728*** (0.000)
Frontline Salary Sqr. X Advertising	0.143** (0.003)	0.166*** (0.000)	0.131** (0.006)	0.034*** (0.000)
Frontline Salary X 9/11	4.430** (0.00)	3.772** (0.009)	4.484** (0.003)	2.155*** (0.000)
Frontline Salary Sqr. X 9/11	-0.180** (0.004)	-0.151* (0.012)	-0.184** (0.004)	-0.089*** (0.000)
Differentiated Business Model	-75.11** (0.005)	-84.90*** 0.000		-19.31* (0.048)
Advertising Expenses	19.56** (0.005)	23.07*** (0.001)	17.96* (0.010)	3.888*** (0.000)
9/11 Dummy	-27.43** (0.002)	-23.74** (0.006)	-27.61** (0.002)	-13.37*** (0.000)
Constant	-162.7* (0.012)	-183.3** (0.003)	-206.0** (0.002)	-46.18*** (0.000)
All Controls	YES	NO	YES	YES
Firm Dummies	YES	YES	YES	YES
Year Dummies	YES	YES	YES	YES
Quarter Dummies	YES	YES	YES	YES
Observations	312	320	312	312
Firms (No. of Airlines)	13	13	13	13
Akaike Information Criterion	248.3	217.4	37.8	7625.2

Exact p-values in parentheses.

† p<0.10, * p<0.05, ** p<0.01, *** p<0.001

socialized frontline human capital will be better integrated into the organization and can identify better with their customers.

While we expected to find a positive interaction effect between frontline human capital and advertising on consumer dissatisfaction (Vomberg et al. 2015), we found a statistically significant negative effect. We now revisit this finding, drawing on expectation-disconfirmation theory (Oliver 1977; 1980). According to this theory, consumers compare their perceptions of performance with their expectations and determine the degree of discrepancy or disconfirmation (Oliver 1977; 1980). A consumer's expectations are rooted in the consumer's comprehensive experience encountering the brand, including an individual's past experiences with a brand, their experiences with other brands in a product category, and what they learn about the brand from news, word of mouth, and other sources (Cadotte, Woodruff, and Jenkins 1987). Firms can use advertising investments to influence consumer expectations as well as to communicate basic information, such as temporary price discounts. As advertising investments increase, it is plausible that the firm is using advertising to set consumer expectations as a primary element of their branding strategy (Otto, Szymanski, and Varadarajan 2020). When advertising sets consumer experience expectations and the firm delivers on those expectations, firms can benefit (Szymanski and Henard 2001).

However, firms often tend to over promise and under deliver (Szymanski and Henard 2001; Zeithaml et al. 1996). Consumers can be more impacted by the experience of the product or service than by the advertisement for the product or service. Consumers may discount the advertisement even if the quality matches their expectations (Kopalle and Lehmann, 1995). In other words, frontline workers may have been better off if there was less advertising so that consumers did not expect much when they came in. In fact, frontline service employee personal authenticity is considered a separate predictor of positive consumer outcomes and matters more when brands are not seen as authentic, illustrating the substitutive relationship (Matthews et al. 2020). Some consumers are known to manage their own expectations, specifically lowering their expectations to improve future satisfaction (Ganesh, Arnold, and Reynolds 2000; Kopalle and Lehmann 2001); in other words, while overstating is generally desirable, understating may be more optimal in certain conditions (Kopalle and Lehmann 2006).

The moderating role of an exogenous variable is very relevant and timely light of the COVID-19 pandemic crises and its devastating impact on the airline industry. This study's results show generally fewer passenger complaints post 9/11. Similarly, in 2020-2021, the American Consumer Satisfaction Index reported increases in average airline satisfaction scores following the outbreak of the COVID-19 crises. The 2020-2021 satisfaction increases may be attributable to the fact that airlines at that time carried 60%, 70%, 80% and for a while even 94% fewer passengers. These lower number of travelers likely received heightened attention from the TSA, airport, and airline employees.

Of course, the industry also experienced much higher rates of unruly consumer behavior on flights (NPR 2021). This highlights two critical lessons. First, firms must recognize that exogenous events can influence consumer satisfaction, dissatisfaction, and complaining behavior. Second, it is helpful to evaluate the many ways in which an exogenous event influences these consumer responses. While third party complaints and satisfaction scores may trend more positive, negative word-of-mouth and other consumer behaviors may still trend more negative. We posit that firms can apply these lessons by considering the source to which consumers attribute potential service failures and by paying attention to how changes impact frontline employees. For example,

the increase in unruly passenger behavior during the COVID-19 pandemic (NPR 2021) clearly caused additional job-related stress for frontline employees in the airline industry.

This highlights the impact of the current study's finding that organizations that had higher levels of investments in frontline employees post-9/11 saw a larger decrease in customer complaints. The finding provides some "tough medicine" guidance to airlines and other service industries working through and beyond the COVID-19 crisis. The devastating drop in airline passengers would make layoffs, furloughs, and other reductions in investments in frontline employees justifiable, but our findings suggest that airlines that figure out a way to continue the investments in their frontline employees will likely see greater benefits in decreased consumer dissatisfaction in the months and years following the crisis.

LIMITATIONS AND FUTURE RESEARCH

We strongly encourage more research into the nature of how exogenous events impact consumer dissatisfaction and complaining behavior and how this impact relates to frontline employees and FHC investments. For example, consumers grudgingly accepted service delays and security changes resulting from 9/11, yet there is a considerable portion of consumers actively fighting service changes resulting from the COVID-19 pandemic. While consumer safety is at the center of both changes, at least some consumers clearly process and react to the changes in very different ways. One option may be to explore how consumer identity influences consumer reaction to service changes due to exogenous events. This may provide consumer-centric insights into how exogenous events impact consumer dissatisfaction in an industry. Additionally, it is important to further study how frontline employees adapt to changes in service design and consumers responses to these changes. Our finding that reductions in FHC investments can result in greater consumer dissatisfaction further highlights the value of research into what mechanisms support frontline employee performance under times of stress and change.

The limitations of our paper may provide paths for future research. We try to generalize our study of frontline workers in the airline industry, but these workers can be considered a public service by some, similar to healthcare workers. It would be important to conduct the same research in healthcare and other industries in transportation as well as agriculture, hospitality, and retail that also arguably provide essential services. Also, while airline industry data provides secondary data covering many of the variables in this study, the operationalization of some variables could be improved. It would be beneficial for future research to utilize more precise operationalizations of frontline human capital and other variables in this study. Due to these limitations, the study should not be viewed as generalizable, pending confirmation from future studies.

Our model has additional limitations that future research could improve upon. For instance, we identified three theory- and phenomena-driven moderator variables, but there may be omitted variables that are important in understanding the relationship between frontline human capital and consumer dissatisfaction and complaining behavior. Additionally, we use consumer dissatisfaction as our dependent variable, but it would be important to see how frontline human capital investments impact other outcomes, such as employee satisfaction and consumer retention.

CONCLUSION

Our paper can provide new avenues for research in marketing, particularly in the area of consumer dissatisfaction and complaining. First, we identify an important antecedent to consumer dissatisfaction, namely frontline human capital investments. However, it would be worthwhile to thoroughly measure the different human capital architectures—novice, experienced, part-time, or

contracted employees— and investigate how they can improve consumer satisfaction and reducing consumer dissatisfaction. This would further expand the strategic view of how organizations and marketers can not only manage the occurrence of online and public consumer complaints (Dahl and Peltier 2015), but also proactively manage complaining behavior before it goes public. Viewing the interaction among frontline employees and consumers as part of the process in co-creating value is consistent with the service dominant logic (Vargo and Lusch 2008). Second, while the current study indicates positive financial returns to the firm that accrues with decreasing consumer dissatisfaction, this relationship is truly interesting and important for firms, thus warranting more focused attention from future research. Third, human capital resources can help firms achieve their marketing objective, but this link has not been thoroughly examined (Moorman and Day 2016; Giannakis, Harker, and Baum 2015). While most marketing research has focused on measuring human capital through consumer service representatives, it would be important to see the indirect impact of non-frontline employees, such as managers, executives, and CEOs. The marketing literature has started to explore topics concerning how firms get marketing professionals to invest in firm-specific human capital (Griffith and Lusch 2007) and the impact of coaching on frontline service employee commitment to service quality (Elmadağ, Ellinger, and Franke 2008). These are promising areas in marketing and in the management of consumer satisfaction, dissatisfaction, and complaining that should be explored.

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