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Employee engagement and the service profit chain in a quick-service restaurant organization

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ABSTRACT

This study examines employee engagement in a quick-service restaurant's (QSR's) service profit chain. It addresses calls for new research from the service profit chain literature by using large sample sizes, a new employee perception construct (i.e., employee engagement), and financial data across multiple years. The findings support service management theory and the service profit chain, in that employee engagement was significantly linked to faster service value performance times, service value performance was significantly linked to customer perception of service, and customer perception of service was significantly linked to sales and controllable profit in year 1 and comparable (year-over-year) sales growth in year 2. The study shows that employee engagement, directly and indirectly, affects operational, customer, and financial performance measures in the QSR and provides initial support for the importance of fostering employee engagement in the workplace.

1. Introduction

The service sector plays a vital role in the global economy, with many countries reporting a considerable portion of their gross domestic product and overall job growth supported by the sector (Pugh & Subramony, 2016). Within the service sector, quick-service restaurants (QSRs) (i.e., fast food) were projected to earn \$859.9 billion globally in 2020 and to employ an estimated 16 million employees by 2025 (2.4% growth) (Hyland, 2020). The global fast-food industry is projected to grow at an annualized rate of 2.1% through 2025 by reducing standardized food items and by promoting more healthful “made-to-order” options at higher prices. Even with projected top-line sales growth and continued technological standardization, the vital role in job growth may be stifled in the future as industry profit is likely to decline from overall wage increases and “wage percentages of revenue increases” (Hyland, 2020, p. 3).

In these times of stagnating profits and economic uncertainty, restaurant operators are evaluating new ways to generate positive and sustainable financial results while accounting for the ever-changing business landscape (Karatepe, 2013). In recent years, organizations have recognized that to reach their goals, organizational leaders must have a profound understanding of the impact of employees on the performance of the organization and the specific conditions to motivate

employees to perform (Evanschitzky et al., 2012). Driving this paradigm shift is the belief that people are the critical component necessary to construct an inimitable competitive advantage (Dessler, 2011). This position is even more vital in the restaurant industry, particularly in QSR organizations, as product differentiation is limited and the quality of the product made and delivered is largely reliant on employees (DiPietro & Pizam, 2008; Mathe & Slevitch, 2013).

As a result of this shift in mindset, knowledge from service management and human resource domains has become of increased interest to the industry (Lu et al., 2014). Research supports the notion that the service performance “hinges substantially upon the orientation of the employees” who are providing the service (Popli & Rizvi, 2015, p. 60), and employees’ behaviors and attitudes indirectly through performance value influence customers’ perceptions of service. In addition, as employee wages continue to rise, negatively affecting the bottom line, understanding what drives employee perceptions, motivations, and performance is important. Employee engagement, a motivation perception construct, has gained traction in both practice and scholarly research due to the significant influence of employee engagement on organizational outcomes, such as customer perceptions, operational performance measures, and financial metrics (e.g., Harter et al., 2002; Salanova et al., 2005; Xanthopoulou et al., 2009). Employee engagement is a “multidimensional motivational concept reflecting the

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simultaneous investment of an individual's physical, cognitive, and emotional energy in active, full work performance" (Rich et al., 2010, p. 619). This energy is tied to the role of others and is directed at job performance (Kahn, 1990) and organizational outcomes (Shuck & Wollard, 2010).

To test the influence of employee engagement on operational, customer, and financial measures, considering service management theory and its corresponding framework is important. Service management researchers have empirically analyzed employee and customer influence on operational and financial performance (Evanschitzky et al., 2012). A popular conceptualization of this stream of literature is Heskett et al.'s (1994) service profit chain model. The service profit chain model reasons that employees and customers are the driving force behind operational and financial performance. Chi and Gursoy (2009) note that the basis of service management theory is that service organizations show appreciation and support for their employees, who in turn nurture relationships with customers, who then fund the organization through loyalty and recommendations to others.

In an effort to empirically assess service management theory, a systematic evaluation of the integrated relationship among employees, customers, and performance measures is necessary (Evanschitzky et al., 2012). In prior studies, the most commonly used employee perception construct, employee satisfaction, has returned mixed results. Maxham et al. (2008, p. 149) note that "value chain tests have largely ignored specific employee perceptions and performances that may drive customer evaluations and store performance" and call for future research to evaluate different employee constructs.

In the engagement literature, researchers (Christian et al., 2011; Gorgievski & Bakker, 2010; Harter et al., 2002; Macey & Schneider, 2008; May et al., 2004; Saks, 2006; Vigoda-Gadot et al., 2013) have defined employee engagement in a broader, more inclusive sense than that of comparable constructs (e.g., employee attitude, job involvement, job affect, job embeddedness, burnout, organizational commitment) including employee satisfaction. Engagement is a multi-dimensional construct measuring cognitive, affective, and behavioral or action-based efforts while working. Employee satisfaction is often a one-dimensional measure of employees' attitudes toward the work environment (Barnes & Collier, 2013). Although employee satisfaction is an evaluative judgment of the work environment and is well studied in the literature (Barnes & Collier, 2013), Macey and Schneider (2008) argue that engagement is a more encompassing construct. Maslach et al. (2001, p. 416) note that engagement "offers a more complex and thorough perspective on the relation between the individual and work" than other constructs, such as employee satisfaction.

Initial empirical research (Rich et al., 2010) has also shown that engagement has a stronger positive influence on performance outcomes than employee satisfaction and other employee constructs. Given that engagement takes a broader, multi-dimensional view of the employee perception process and given current needs in the QSR industry, empirically examining the relationship of engagement in an interrelated model of organizational outcomes is important. Currently, the literature is limited in assessing engagement in this type of model, and service management theory offers a model that allows further examination of this phenomenon.

The limited literature creates a research gap that limits the proliferation of engagement as a viable consideration for addressing restaurant concerns (Lambert et al., *in press*). Whereas previous research has used employee satisfaction as a measure of employee perception, the present research works to address this gap by extending service profit chain research to include employee engagement as the employee perception construct. Specifically, the study draws on the service profit chain model to evaluate the influence of employee engagement on operational service value performance, the influence of service value performance on customer perceptions, and the influence of customer perceptions on financial performance in two periods. In this cross-sectional, multi-source, quantitative design, we aggregate all

employee and customer data to the restaurant level to examine the overall impact of these constructs on a fast-food organization's operational and financial performance. In addition to evaluating employee engagement in the chain model, this study aims to address research concerns in service profit chain research. Service profit chain research has been plagued with small sample sizes at the employee, customer, and organization level, and many researchers (Briggs et al., 2020; Kim, 2014; Silvestro & Cross, 2000; Solnet et al., 2018) have called for future studies to employ larger sample sizes to better evaluate the relationship among the variables. Scholars have also called for multi-equation modeling (Silvestro & Cross, 2000) and multi-time measurements (Bernhardt et al., 2000; Briggs et al., 2020) in future studies. This study employs structural equation modeling (SEM) to test the relationship among the constructs, including a year 2 financial measure to evaluate sales growth's association in the service profit chain.

2. Literature review and hypotheses

Researchers (Chen et al., 2020; Eldor & Vigoda-Gadot, 2016; Macey & Schneider, 2008) often cite Kahn (1990) as the formative researcher who introduced the concept of employee engagement. Kahn described employee engagement as "harnessing of organization members' selves to their work roles; in engagement, people employ and express themselves physically, cognitively, and emotionally during role performances" (p. 694). Shuck and Wollard (2010) expanded on this definition, noting that this process is directed toward achieving organizational objectives. May et al. (2004) were the first to establish empirical significance of Kahn's conceptual argument by developing a model that quantitatively indicated relevance. May et al.'s empirical research coupled with Kahn's conceptual framework has shaped the foundation for others to build on (e.g., Rich et al., 2010; Saks, 2006; Soane et al., 2012).

Expanding on the engagement theory developed by Kahn (1990) and empirically tested by May et al. (2004), Rich et al. (2010, p. 619) argued that job engagement is the *simultaneous* involvement of physical, cognitive, and emotional energy towards work performance. Saks (2006) offered an analogous description when he conceptualized employee engagement to reflect an employee's cognitive, emotional, and behavioral state and how that state influences individual role performance. For the purpose of creating organizational practices that foster employee engagement, understanding that engagement is a multidimensional framework that can be "experienced emotionally and cognitively and manifested behaviorally" (Shuck, 2011, p. 314) is important.

The cognitive component of engagement is the appraisal of the current conditions at work and the ability to find meaningfulness and safety, two of Kahn's (1990) stated conditions, in their work (Shuck et al., 2011). The second component, emotional engagement, "stems from the emotional bond created when employees, on a very personal level, have made the decision to cognitively engage and are willing to give themselves" fully to the job, which triggers the physical dimension of engagement (Shuck & Herd, 2012, p. 160). The physical or behavioral component of engagement is the active, observed dimension of engagement (Rich et al., 2010) that interests organizations the most (Saks, 2008).

Arguably, this multidimensional framework directed at performance outcomes differentiates engagement from employee satisfaction (Rich et al., 2010), the most commonly used employee perception construct in the service profit chain. Engagement includes the appraisal of the employee's experience, the interpretation of that appraisal, and, ultimately, the manifestation of behaviors based on that appraisal (Shuck et al., 2013). It is important to note that researchers (e.g., Dalal et al., 2008; Griffin et al., 2008; Newman & Harrison, 2008) have argued that employee engagement is nothing more than a redefined version of older, existing constructs. However, both Christian et al. (2011) and Rich et al. (2010) empirically analyze and support the notion that engagement

offers value above and beyond other job attitude constructs, such as employee satisfaction.

Empirically, Rich et al.'s (2010) research produced stronger effect sizes linked to and from engagement than other employee constructs, including employee job satisfaction, in the same model. Christian et al. (2011) observed engagement's discriminant and criterion-related validity over job attitudes. In addition, researchers generally operationalize satisfaction measures as more of a fixed appraisal of the favorability of one's job, and the "cognitive or purely evaluative aspects have been the predominate focus in theory and measurement" (Judge et al., 2017, p. 357), whereas engagement includes cognitive and emotional self-appraisals expressly focused physically or behaviorally on work performance (Rich et al., 2010). This conceptualization of the engagement construct encompasses a broader view of what motivates employees to behave or perform in the workplace (Halbesleben & Wheeler, 2008; Macey & Schneider, 2008; Rich et al., 2010). This comprehensive focus of the engagement construct supports testing this concept in the popular service profit chain model.

2.1. Service sector engagement research

Employee engagement research in the service sector has found positive, significant relationships between engagement and outcomes that are relevant to the QSR industry, including operational performance, retention/turnover, customer perception, and financial performance. Operational performance is one of the more commonly studied outcomes in engagement research, and multiple studies have found a positive influence of engagement on job performance and extra-role customer service (Karatepe, 2013), service delivery organizational citizenship behaviors (Ling Suan & Mohd Nasurdin, 2016), and service recovery performance (Karatepe & Olugbade, 2016) in various hospitality organizations. From a retention/turnover perspective, Fleming et al. (2005) found that engaged groups have higher levels of retention. In addition, after an employee engagement initiative, one hotel chain realized a reduction in turnover of 3.6% overall and several times that at locations fully embracing the engagement initiative (Schneider et al., 2009).

In addition to studies on operational performance and retention/turnover measures, initial research has shown a direct relationship between engagement and customer perceptions and engagement and financial performance. Schneider et al. (2009) found improved customer service metrics after the implementation of engagement initiatives. Engagement was also positively linked to customer perceived employee performance (Menguc et al., 2013) and customer perceived service quality (Myrden & Kelloway, 2015). From a financial perspective, Xanthopoulou et al. (2009) found a direct link between day-level engagement and day-level financial returns, and Harter et al.'s (2002) meta-analysis, mostly in service, retail, and public service organizations, established that organizations with greater employee engagement saw higher monthly revenue and sales.

These studies individually support employee engagement as a compelling motivational construct to be evaluated within the service and hospitality sector. Arguably, many of these studies have evaluated what would be considered single links in the service profit chain, but a current gap exists in evaluating employee, operational, customer, and financial metrics in one model.

2.2. Service profit chain research

As competition increased for many industries within the service sector and as customer demands for service-related interactions grew, marketing studies established service management theory as a blend of relationship marketing and internal marketing (Grönroos, 2006). Relationship marketing aims to describe the interactions between customers and organizations with the goal of building long-term reciprocal relationships (Gummerson, 1987). Internal marketing focuses on the role

of employees in the customer service exchange and its impact on customer evaluations and loyalty (Grönroos, 2006). Lambert et al. (in press) noted that evolving from marketing research, service management combined these perspectives and integrated multiple functions within organizations including human resource management, marketing, service quality management, and operations management providing a more strategic view of service in an organization.

Service management is defined as a holistic firm approach "that makes quality of service, as perceived by the customer, the number one driving force for the operations of the business" (Albrecht, 1988, p. 20). As such, the fundamental framework of service management theory is the examination of the organization and its customers (Subramony & Pugh, 2015). Grönroos (1990) outlined six principles for service management including aligning rewards systems with customer perceptions of quality, giving employees autonomy, creating a supportive service climate, empowering employees, and ensuring organizational agility in deploying resources. Service management works to understand organizations' offerings including the interaction of the product and the service as it relates to value creation for the customer (Grönroos, 1994). It also includes understanding how the organization creates the environment to produce this value for the customer (e.g., service employees, management, technology, resources, processes) and then empirically tests that organizations are built in a way that consistently achieves value creation for customers over the long term. This way of thinking is a paradigm shift from scientific management tenets of "mass production and economies of scale" to the use of internal resources (including employees) to create and deliver quality products and experiences for customers (Grönroos, 1994).

Heskett et al. (1994) further developed service management theory in their conceptual article on the service profit chain. They discussed the connections among internal service quality, employee, external service value, customer, and financial measures as individual links in a chain. Since then, researchers have evaluated the service profit chain by examining the relationships among these constructs (e.g., Bernhardt et al., 2000; Heskett et al., 1997; Hogreve et al., 2017; Hong et al., 2013; Rucci et al., 1998). The exact constructs used to evaluate the relationships among these variables have differed depending on service context, literature reviews, and availability, but all studies have worked to evaluate how organizations, employees, and customers influence, either directly or indirectly, financial metrics in service organizations.

Researchers have found overall support for the foundation of the service profit chain (e.g., Bernhardt et al., 2000; Heskett et al., 1997; Rucci et al., 1998), as have two meta-analytic studies (i.e., Hogreve et al., 2017; Hong et al., 2013), though a few studies have found non-significant or significant and negative relationships in the model when a positive relationship was expected. Specifically, the employee perception measure, often employee satisfaction, has repeatedly produced inconsistent results in the service chain model (e.g., Silvestro, 2002; Silvestro & Cross, 2000; Tornow & Wiley, 1991; Wiley, 1991). Bowen and Schneider (2014, p. 7) note that employee satisfaction is "neither focused on service nor on customer experience," supporting the idea that the construct is not necessarily directed at positive service outcomes.

In addition, across service profit chain research, scholars have called for future research to include larger sample sizes (Kim, 2014), multivariate analysis (Silvestro & Cross, 2000), multi-time measurements (Briggs et al., 2020), and analysis of the model with different employee perception and performance constructs (Maxham et al., 2008). Recent studies have worked to address these calls, including that of Myrden and Kelloway (2015), which evaluates engagement within a portion of the service chain model. Myrden and Kelloway's (2015) research indicates that employee engagement is positively associated with customer perception of service quality. The results also show a positive link between service quality and customer satisfaction. However, their model included no financial metric, and the study had a small employee sample size (i.e., 29 employees). Nonetheless, the researchers provide initial

support for the utilization of the employee engagement construct in the chain.

Solnet et al. (2018) tested the service profit chain in the full-service restaurant industry. They combined multiple job attitudes, including employee engagement and job satisfaction, into one construct and found overall support for the service profit chain, particularly when evaluating the chain with a time lag. However, they noted that the sample size was “too small for more sophisticated analysis” (p. 276) and that customer evaluations were limited to 12–15 evaluations per year per unit. The researchers concluded that many uncontrollable factors influence the profit construct, making it difficult to analyze in the model, and recommended analysis using other financial constructs.

Briggs et al. (2020) linked organizational service orientation to retailer profitability by applying the service profit chain and found support for the links in the chain with moderate sample sizes of employees (180) and managers (144). They also used manager responses to evaluate customer satisfaction and retail profitability. However, they called for future research to “verify that the findings are replicable with larger samples of respondents” (p. 277) and to include customer data and objective financial measures.

The current study works to address scholars’ calls for further research (Briggs et al., 2020; Kim, 2014; Myrden & Kelloway, 2015; Solnet et al., 2018) and thus contributes to the literature in multiple ways. First, the study explores the influence of employee engagement as the employee perception construct in the service profit chain model. Service management moved the literature in human resource management from a focus on internal employee constructs to constructs linked to customer perceptions and objective operational measures (Bowen, 2016). Subramony et al. (2017) noted that as the service sector has grown, service management research involving employee constructs has not fulfilled its potential and more research is needed. Second, it analyzes all paths in the service profit chain simultaneously using SEM and thereby addresses calls for multivariate analysis. The research employs SEM with employee and customer latent variables in a path-analytic framework. The use of a latent factor helps account for the measurement error present in the variables, and the path analysis allows for a better examination of complex relationships among the variables. The SEM model tests the fit of the theoretical framework with the data. Third, the financial outcomes measures cover two periods - sales and controllable profit in the first fiscal year and comparable (year-over-year) sales growth in the second fiscal year. Last, the study collects large

sample sizes (314 restaurant locations, 3,910 employee responses, 130,159 customer responses) to evaluate the chain model. Fig. 1 illustrates the theoretical service profit chain model for this study.

2.3. Hypotheses testing

Supported by the conceptualization of engagement research (Shuck & Wollard, 2010), increased levels of engagement should be directed at desired performance outcomes in the QSR industry. Service value performance is a key performance indicator in QSRs, as it measures the consistency of fast service (Kacmar et al., 2006). Empirical research demonstrates the relationship between employee engagement and similar performance measures (e.g., Menguc et al., 2013; Rich et al., 2010; Salanova et al., 2005). Service profit chain research also supports the association between the employee perception construct and service value performance (Heskett et al., 1994). In this study, we evaluate the service value performance measure with a delivery time variable (i.e., service delivery speed). Service delivery speed is a time variable calculated automatically by the restaurants’ point-of-sale systems. The time variable starts at the point at which the customers place their order and stops when the customers receive their order from the restaurant. In this situation, the goal is faster delivery, which translates to lower delivery times. Therefore, we hypothesized that higher levels of employee engagement would create faster (i.e., lower) service value performance delivery times, as engaged employees work more efficiently and effectively toward the organization’s goal of providing quick service. As employee engagement increases, the service delivery speed to customers should decrease, indicating a negative relationship between employee engagement and service value performance. Thus:

H1. Employee engagement is negatively associated with service value performance.

The QSR industry promotes the notion of speed and service, creating a performance expectation in the minds of customers that the organization must consistently meet (Kacmar et al., 2006). Service profit chain research, based on its roots in relationship marketing research, supports the concept of productivity and performance measures influencing customers’ perceptions of service (Rucci et al., 1998). A main premise in service management research is that service climate drives service performance, ultimately influencing customers’ perceptions of service (Johnson, 1996; Schneider, 1980). Ployhart et al. (2011, p. 358) suggest, with the support of other researchers (Kacmar et al., 2006; Liao &

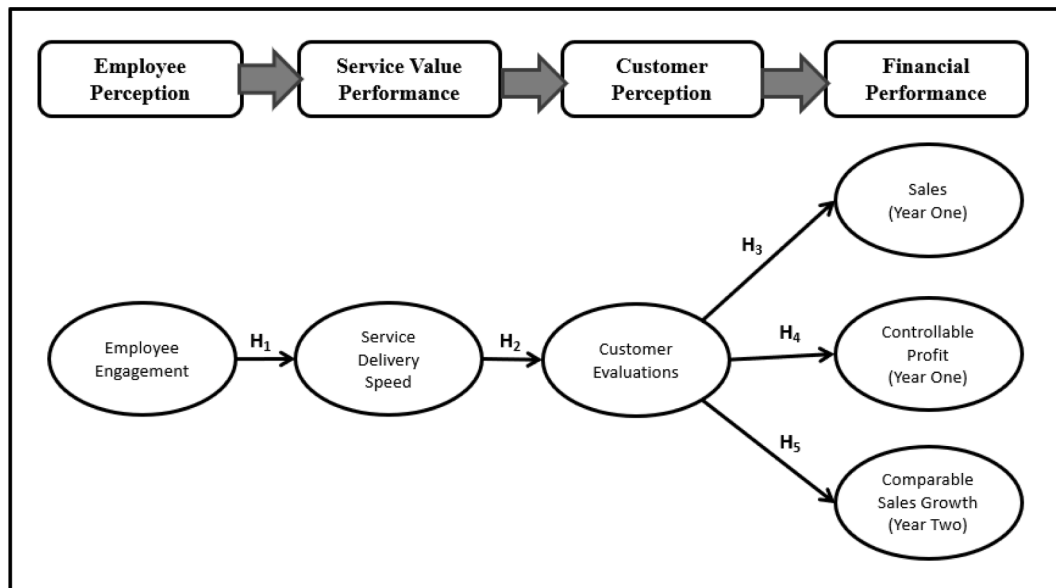


Fig. 1. Conceptual model.

Chuang, 2004; Schneider & White, 2004), that “customers’ perceptions of the staff’s hospitality, accuracy of orders, speed, and product quality highly affect customer satisfaction,” leading to higher spending. Liao and Chuang (2004) found a cross-level interaction between individual- and restaurant-level service performance and customer outcomes. They recommended that future studies include a service performance variable not measured through self-reported data. Therefore, the current study uses the service delivery speed variable as calculated by restaurants’ point-of-sale systems as the service value performance construct. We expect that the faster (i.e., lower) the time to deliver the order to the customer at a QSR, the higher the customer’s evaluation of the service will be. We hypothesize that service value performance, evaluated using service delivery speed, is negatively associated with customer perceptions of service. Faster (i.e., lower) delivery time is associated with higher levels of favorable customer perceptions of service. Thus:

H2. Service value performance is negatively associated with customer perceptions of service.

Many service management and relationship marketing researchers (Hallowell, 1996; Heskett et al., 1994; Storbacka et al., 1994) suggest that long-term relationships with customers can positively affect financial performance. Hallowell (1996, p. 29) noted that “both the service management and marketing literature suggest that there is a strong theoretical underpinning” for the relationship between customer perceptions and financial performance. Gummerson (1987) argued that employees nurture and build these long-term relationships with customers through consistent, strong, positive customer interactions, leading to positive customer perceptions of service.

Service profit chain researchers have proposed that customers’ perceptions of service influence the likelihood that they will return and share word-of-mouth praise with other potential customers, which inevitably leads to financial performance (Maxham et al., 2008). Empirical studies (Gupta & Zeithaml, 2006; Rucci et al., 1998; Rust et al., 1995) have found a positive, significant relationship between customer perceptions, particularly customer satisfaction, customer loyalty, and financial performance. In addition, Anderson et al. (1994, p. 54) noted the importance of measuring customer perception constructs at the cumulative level, as doing so allows for a “more fundamental indicator of the firm’s past, current, and future performance. It is the cumulative satisfaction that motivates a firm’s investment in customer satisfaction.” Although service profit chain research has assessed the relationship between customer measures and profitability, researchers (Gomez et al., 2004; Maxham et al., 2008) have provided initial support for customer perceptions of service and sales. Therefore, we examined both sales and controllable profit in year 1 in the model, with the expected outcome of positive associations with customer perceptions of service. In addition to evaluating financial measures from year 1, we evaluate year 2 comparable sales growth to determine whether the influence of the service profit chain is positively linked to sales growth between year 1 and year 2.

H3. Customer perceptions of service are positively associated with year 1 sales.

H4. Customer perceptions of service are positively associated with year 1 controllable profit.

H5. Customer perceptions of service positively affect comparable sales growth in year 2.

3. Methods

3.1. Sample and procedures

An electronic survey collected data from employee respondents, and communication to employees occurred through the organization’s email accounts and fliers hung on the communication boards of the restaurants. All store managers received an email communication from the president of the organization with instructions about the relevancy of completing the surveys promptly. The organization’s human resource

business professionals located across the country made five attempts by email to the management team at the store to have employees complete the survey within a two-week time frame.

A note from the organization to employees introduced the survey and contained clear information assuring confidentiality and anonymity for all employees. The employees were “on the clock” and therefore paid for the time they took to complete the survey. They were allowed to complete the survey on their smartphones or via the training kiosk in the back of the restaurant to ensure privacy and anonymity of responses. The employee survey data collected contained no identifying information, such as name, email address, or employee number, and the customer data provided by the organization excluded any ability to identify customers.

Customers at the restaurant locations had the opportunity to go online and complete a survey related to their experience at the restaurant. The bottom of every third receipt provided instructions with a link and a code for customers to go online anonymously and complete the survey in exchange for a free product coupon. The customer survey was handled by a third-party vendor, and individual and aggregated data were given to the organization daily. The data provided to us were individual-level data from all customer surveys over the full fiscal year, which we subsequently aggregated to the store level for analysis. Customers completed the survey after their experience at the restaurant had come to an end, ensuring that the whole experience, good or bad, was evaluated at the time of survey completion.

The employee study comprised hourly team members and managers who worked for one fast-food restaurant chain, along with the customers who visited the restaurants. We chose restaurant-level team members, managers, and customers for this study because of their ability to affect the financial results of their stores and the organization as a whole (Anderson et al., 1994; Subramony & Pugh, 2015; Xanthopoulou et al., 2009). Given that all restaurant employees had access to complete the survey, we consider the data collection technique a census of the population.

We measured all hourly employees and managers in the restaurant as it aligned with previous service profit chain literature in the restaurant industry (e.g., Chi & Gursoy, 2009; Kim, 2014; Solnet et al., 2018). In addition, everyone’s work in the restaurant contributes to the fast, effective, and accurate delivery of the product ordered, and the stores’ individuals have a shared perception of the environment (Borucki & Burke, 1999). Internal marketing, from which service management theory is built, focuses on treating all employees like customers and appreciating their separate roles in the service organizations (e.g., Berry, 1981; Grönroos, 1990). Bowen (2016) proffered the service value co-creation process between organizations and customers includes operand and operant resources. Operand resources are more tangible such as the physical facilities and goods while operant resources are more intangible and include the employee-customer encounter. Bowen (2016) stated, “operant resources act upon operand resources to produce effects customers use in forming their experience of value” (p. 6). Thus, the integration of resources among all employees’ roles (the store environment, product creation, and the interaction with the customer) is all a part of the co-creation service value process. Therefore, it is important to evaluate engagement from all employees in the restaurant even if they did not have direct interaction with customers.

We measured employee engagement at one point in time over one month in the middle of the fiscal year. Employees evaluated their engagement level at work and on the job, which was not tied to a specific moment at work. Employees were able to complete the survey at any point during their shift. As Pugh and Dietz (2008, p. 46) note, measuring engagement at the organizational or unit level is important because to practitioners, it is “often more of a barometer of success than the performance of individuals.” As such and given the purpose of the study, we aggregated the employee data to the restaurant level after data collection.

Given the need to aggregate respondents’ scores at the restaurant

level, we considered the minimal conditions for sample size at both the individual raw data level and the restaurant aggregate level. In line with [Krejcie and Morgan's \(1970\)](#) recommendation, we needed a minimum of 370 employees and 384 customers at the individual raw data level and 191 restaurants at the aggregated data level. A minimum of three employee respondents and customer respondents per location was sought to reduce the possibility of a Type II error and to strengthen statistical power at the aggregated level ([Huta, 2014; Stevens, 2009](#)).

The fast-food chain meets the criteria of fitting into the hospitality industry and service sector. The average unit volume of the restaurants within this organization was \$1.2 million. The restaurants were predominately located in the southern United States and had been open and serving guests for a minimum of the entire fiscal year during which data were collected. In total, 389 restaurants associated with one organization participated in collecting surveys from their employees and customers. At the time of the employee survey, the restaurants employed 10,587 employees, and all employees (team members and managers) in the restaurant were asked to participate. In total, 4,628 of the approximately 10,587 employees answered the employee survey, representing a response rate of 43.71%.

We eliminated surveys using listwise deletion if restaurants had fewer than three employee responses per location (no restaurant had under three customer responses). This included the elimination of 24 employee responses across 15 locations. In addition to the elimination of the 15 locations due to low employee responses, 60 locations had store interruptions (e.g., closed, sold, rebuilt, unforeseen events) that lasted more than one month at some point during the two fiscal years, which limited the ability to collect complete financial and operational data. For this reason, we also eliminated these 60 locations along with the 694 employee surveys (and customer surveys) associated with these locations. After eliminating the employee responses from these 75 restaurant locations in preparation for aggregation, we retained 3,910 employee responses, representing a 36.93% response rate of the total population.

The organization provided 152,199 customer surveys for all restaurant locations. Store interruptions and low employee response rates led to the elimination of 22,040 customer surveys across the 75 restaurant locations using listwise deletion, leaving 130,159 customer responses. Overall, we retained 314 restaurant locations as the final sample used in the analysis. The sample size and corresponding response rate are considered acceptable for multivariate analysis ([Hair et al., 2010](#)).

Given the large sample size and the census data collection employed, we did not include additional controls. This is in line with [Chi and Gursoy's \(2009, p.247\)](#) service profit chain research. They noted the “sheer size of the sample should minimize the impact of variables that are beyond the control of this study and reveal the true relationships between customer satisfaction (perception measures) and financial performance.” In addition, the census data collection procedure provides value by including the qualitative inclusion of small variances within a population which would be masked by a sample ([Deming and Stephan, 1941](#)). As mentioned previously, census data collection was used for the employee perception construct. Census data procedures were also employed for financial and operational performance measures with data collected from 81% of the organization's restaurants.

3.2. Measures

We measured employee engagement using [Rich et al.'s \(2010\)](#) previously validated employee self-report job engagement instrument, which includes a cognitive, physical, and affective (emotional) component. The coalesced 18-item scale measures responses along a 5-point Likert scale (1 = *strongly disagree*, 5 = *strongly agree*). However, the current study used a 7-point Likert scale to mitigate the lack of variance among responses ([Podsakoff et al., 2003](#)). Building on [Kahn's \(1990\)](#) conceptualization of engagement, [Rich et al. \(2010\)](#) developed three separate scales: physical, emotional, and cognitive engagement. The physical sub-scale includes items such as “I strive as hard as I can to

complete my job.” The emotional subscale includes items such as “I am interested in my job.” The cognitive sub-scale includes items such as “At work, my mind is focused on my job.”

Similar to [Loveman's \(1998\)](#) and [Silvestro and Cross's \(2000\)](#) performance constructs, we evaluated service value performance as a measure that precedes customer perceptions of service. The service performance delivery time construct aligns with the service value construct of [Heskett et al. \(1994\)](#). The organization provided the service performance average time variable for each location for the entire fiscal year. As noted previously, this variable measures the amount of time it took, on average, from the time customers started placing their order with the order taker until they received their order. This time was automatically calculated by the restaurant's point-of-sale system from the time the conversation started between the order taker and the customers. This time variable is an objective measure that limits the potential for subjective bias by individuals.

The organization also provided the customer perception measure, which included all customer survey data for the entire fiscal year. The organization used an outside vendor to manage the customer survey process, in which customers provided feedback based on a recent visit. The scale measured responses along a 5-point Likert-type scale (1 = *highly dissatisfied*, 5 = *highly satisfied*). The customer perception survey included items related to (1) the level of overall satisfaction with the experience, (2) the value the customers believed they received, (3) satisfaction with the friendliness of the employees they encountered, (4) satisfaction with the speed with which the food was delivered, (5) satisfaction with the cleanliness of the store, and (6) customers' likelihood to return to the restaurant in the near future.

The organization provided the financial performance measures, which included the financial indicators aggregated to the restaurant level. We evaluated sales and controllable profit data in year 1 and year 2 comparable sales growth data for each restaurant location in the model. Sales performance refers to the amount of money the store made in each year before any deductions for discounts or costs. Controllable profit is a metric within the restaurant manager's control ([Shillinglaw, 1957](#)). This profit represents the amount left after expenses within the manager's control (e.g., labor, food and paper, repair and maintenance) are deducted from revenues for a given period, but it excludes other costs outside the store manager's control and can be highly dependent on the location (e.g., lease amounts). Comparable sales growth captures sales earned in year 2 relative to sales earned in the same period from the previous year. We standardized all financial metrics and used z-scores in the structural equation analysis.

3.3. Restaurant-level aggregated data and reliability

The study required employee and customer perception data to be analyzed at the restaurant level. Theoretical support ([Borucki & Burke, 1999; Schneider, 1980; Schneider & Bowen, 1985](#)) exists in the literature regarding the need to analyze raw data at the restaurant level. [Borucki and Burke \(1999\)](#) found that each of the locations in their study (i.e., bank branch locations) must work together to deliver excellent service to their guests, to meet performance goals, and to strengthen the location's financial performance. They noted that “there are theoretical reasons for expecting employee work environment perceptions to be similar in specific work environments, and thus for considering aggregated employee data as indicators of organizational-level (climate) constructs” (p. 952). They also suggested using the same reasoning for aggregating customer data and noted that these rationales can lead to generalizability in a service context. Thus, we aggregated the data for the study based on the aggregate mean function.

We analyzed the three first-order dimensions of the second-order job engagement scale (i.e., physical engagement, emotional engagement, and cognitive engagement) at the aggregated restaurant level. Physical engagement generated a Cronbach's alpha score of 0.94. Emotional engagement produced a score of 0.97, and cognitive engagement

yielded a score of 0.96. These scores are consistent with Cronbach’s alpha scores in Rich et al.’s (2010) original analysis of the scale. The customer perception variable produced an acceptable Cronbach’s alpha score of 0.97.

3.4. Restaurant-level exploratory factor analysis.

We conducted exploratory factor analysis (EFA) at the aggregated restaurant level for the customer perceptions scale to ensure a simple structure, given that an EFA for this scale does not currently exist in the literature (Hair et al., 2010). We evaluated the appropriateness of running an EFA using a principal components analysis extraction method before analysis. Comrey and Lee (1992) noted that sample sizes larger than 300 are acceptable for factor analysis. For the customer EFA, the sample included 379 restaurant locations with 140,333 customer surveys, which met the minimum sample criteria supported by the literature. This sample included data provided by the organization for the year before the year analyzed in this research.

The correlation matrices far exceeded the minimum of one correlation coefficient higher than 0.3. In addition, the Kaiser–Meyer–Olkin measure of 0.92 and statistically significant scores ($p < 0.05$) for Bartlett’s test of sphericity supported the data for factor analysis (Kaiser, 1974). A varimax orthogonal rotation helped interpret the final component solution and confirm simple structure for each of the factors. Interpretation of the data was consistent with the design of the measures, as supported by literature (Rich et al., 2010). Using the results of the EFA, we extracted one factor from the data. The only component with the eigenvalue above 1 was at 5.16 (Hair et al., 2010). The sums of squared loadings’ cumulative percentage for the one factor was 86.05%. The factor loadings for the items included in the customer perceptions scale ranged from 0.89 to 0.96.

3.5. Common method variance

We employed Harman’s single factor test to analyze common method variance. Through SPSS, we constrained the factors in the model to one and examined the unrotated solution. Five components were above the one eigenvalue cutoff and explained 82.19% of the variance. The sums of squared loadings’ cumulative percentage for the one factor was 46.25%, below the 50% cutoff (Podsakoff et al., 2003). No individual factor accounted for the majority of the variance, indicating that the risk of bias from common method variance was low.

4. Results

4.1. Measurement model analysis

A confirmatory factor analysis (CFA) assessed all constructs in the model simultaneously. This included 28 observed variables. Of the observed variables, 18 were linked to the job engagement construct, six to the customer perception construct, and four items for the service performance, sales, controllable profit, and comparable sales constructs. We evaluated incremental and absolute fit indices along with the chi-square statistic for goodness-of-fit following Hair et al.’s (2010) recommendations. The CFA produced standardized loadings were significant and between 0.80 and 0.98, well above the minimum 0.50 cutoff value. Chi-square was large at 650.52 and significant, but this was expected given the large sample size and number of variables in the model. The adjusted chi-square ($\chi^2/df = 1.94$) was below the stricter limit of 3.00. The RMSEA indicated good fit at 0.055 (90% confidence interval [CI] 0.05–0.06), and both TLI and CFI were both 0.97, well above the 0.90 limit.

4.2. Convergent and discriminant validity

We confirmed convergent validity by calculating composite

reliabilities (CRs) and the average variances extracted (AVEs). AVEs above 0.50 and CR values above 0.60 were accepted (Hair et al., 2010). Discriminant validity was established, given that the maximum shared variance (MSV) values were lower than the corresponding AVE values. Table 1 presents the CR, AVE, and MSV values for the employee and customer scales in the measurement model. Convergent validity, evaluated by AVEs and CRs, and discriminant validity, evaluated through comparison of MSVs and AVEs, along with the high Cronbach’s alphas noted previously, established reliability and validity in the employee and customer perceptions scales in the measurement model. Table 1 presents the correlation matrix and includes the validity measures for the latent variables.

4.3. Invariance testing

To determine if limited time periods (months) could reveal changes within the model that annualized data may obscure, we executed invariance testing (Byrne, 2004). Using multi-group covariance structural analysis according to Yuan and Bentler (2005), the installation of sequenced constraints on the model allows for increasingly strict tests of invariance demonstrated in non-significant changes to chi-square. The baseline nested model data demonstrate acceptable fit, with $\chi^2 1306.100p < 0.001, df = 690; \chi^2/df = 1.89; CFI = 0.97; TLI = 0.97; RMSEA = 0.040$ thus, establishing configural invariance (See Table 2). Next, we constrained the factor loadings which demonstrates a change in $\chi^2(df)$ to the baseline of 33.70(24), $p \geq 0.090$; therefore, the lack of significant chi-square change establishes metric invariance. Next factor covariance is constrained resulting in 33.75(27), $p \geq 0.121$, establishing scalar invariance. Finally, we constrained factor invariance resulting in 33.75(28), $p \geq 0.149$, establishing factor invariance. Testing the model to factor invariance provides sufficient evidence that no significant change is demonstrated between the monthly and annual data (Steenkamp & Baumgartner, 1998) therefore providing sufficient evidence to complete the analysis using the annual data (Pedhazur, 1982).

4.4. Structural model analysis

Following the two-step approach Hair et al. (2010) outline, we evaluated the hypothesized model for construct validity through model fit indices of the measurement model. After confirming construct validity, we specified and examined the structural relationships of the model. The two-step SEM process is superior to the one-step approach because it allows for a full assessment of fit and validity (one measurement and one structural), given that “valid structural theory tests cannot

Table 1
Descriptive statistics and correlation matrix.

Variable	1	2	3	4	5	6
1. Employee engagement	1.00					
2. Service value performance	−0.13*	1.00				
3. Customer perceptions	−0.02	−0.51***	1.00			
4. Year 1 sales	−0.08	−0.10	0.15*	1.00		
5. Year 1 controllable profit	−0.06	−0.18*	0.22***	0.97***	1.00	
6. Year 2 comp sales growth	0.11	−0.15**	0.12*	0.04	0.06	1.00
Mean	6.32		4.55			
SD	0.31		0.14			
Composite reliability	0.91		0.98			
AVE	0.78		0.88			
MSV	0.02		0.26			

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$. Note: Financial and operational means and SD are excluded as they have been standardized.

Table 2
Invariance testing.

Constraint	Invariance	DF	CMIN	P	NFI Delta-1	IFI Delta-2	RFI rho-1	TLI rho2
Baseline Comp Model	Configural	690	1306.100	0.000	0.936	0.969	0.930	0.966
Factor Loading	Metric	24	33.698	0.090	0.002	0.002	-0.001	-0.001
Factor Covariances	Scalar	27	35.750	0.121	0.002	0.002	-0.001	-0.001
Factor Variances	Factor	28	35.750	0.149	0.002	0.002	-0.001	-0.001

be conducted with bad measures” (Hair et al., 2010, p. 711). For purposes of this study, as illustrated in the conceptual model in Fig. 1, employee engagement was the exogenous construct, while the other four constructs were endogenous.

The results of the recursive model indicated that the data fit the model well. The chi-square statistic was large and significant; however, we expected this, as the sample size was large. The adjusted chi-square was below 3.00, RMSEA was below the stricter limit of 0.06, and CFI and TLI were both well above 0.90 ($\chi^2 = 706.46, p < 0.001, df = 345; \chi^2/df = 2.05; CFI = 0.97; TLI = 0.97; RMSEA = 0.058; 90\% CI 0.05–0.06$). Following the review of model fit, we evaluated the hypothesized relationships for empirical support.

4.5. Analysis of hypotheses

H1 was supported, as the relationship between employee engagement and service value performance was negative and significant ($\beta = -0.13, p = 0.03$). H2 was also supported, as the relationship between service value performance and customer perceptions of service was significant and negative ($\beta = -0.51, p < 0.001$). In addition, H3 was supported, as the relationship between customer perceptions of service and year 1 sales was positive and significant ($\beta = 0.15, p < 0.001$). H4 was supported, as customer perceptions of service and year 1 controllable profit was positive and significant ($\beta = 0.22, p = 0.01$). Finally, H5 was supported, as the relationship between year 1 customer perceptions of service and year 2 comparable sales growth was positive and significant ($\beta = 0.13, p = 0.03$). Given the fit of the model and the supported links in the chain, this study found support for the service profit chain using employee engagement as the employee perception construct. Table 3 shows the models’ hypothesized structural relationship results, and Fig. 2 depicts the standardized estimates in the structural model.

5. Discussion

The current state of the QSR industry has prompted the need for additional research related to the influence of employees on operational, customer, and financial measures, both directly and indirectly. Drawing on service management theory and extending the service profit chain

Table 3
Hypothesized structural relationships.

	Unstandardized estimate	SE	Standardized estimate	Result
H1: Engagement → Service perf	-0.29*	0.13	-0.13	supported
H2: Service Perf → Customer	-0.09***	0.01	-0.51	supported
H3: Customer → Year 1 sales	1.42*	0.55	0.15	supported
H4: Customer → Year 1 controllable profit	2.18***	0.54	0.22	supported
H5: Customer → Year 2 comp sales growth	1.21*	0.55	0.13	supported

* $p < 0.05$ *** $p < 0.001$. Note: Engagement = employee engagement, service perf = service value performance, customer = customer perceptions of service, comp sales growth = comparable sales growth.

and employee engagement literature, this study empirically tested and found overall support for the service profit chain model, including the utilization of employee engagement as the employee perception construct. This study supports the notion that “to survive in such a competitive market, it is crucial that customers are satisfied not only with the product and the dining environment (hardware), but also with the service (software) provided by employees” (Lam & Zhang, 2003, p. 214).

Employee engagement has become a popular topic of interest in both practice and academia (Albrecht et al., 2018). (Shuck, Rocco, & Albornoz, 2011, p. 320) note “in this unstable, uncertain environment, perhaps more than at any other time in recent history, engaging employees has become a strategic imperative; one that will become a key source of competitive advantage for organizations who develop a passionately committed employee base.” We show that employee engagement positively influences service value performance similar to prior research in the engagement literature. In addition, the model indicated good fit, and all links in the chain were supported, suggesting that employee engagement is a viable employee construct to use in the service profit chain. In the model, employee engagement starts the chain of positive associations and ends in positive financial outcomes. These findings support Shuck and Wollard’s (2010) definition of engagement as being directed to achieving organizational objectives. Although the link between engagement and service value performance is small, the findings are functionally practical. As Brown and Lam (2008) contend, it is notable that employees can explain that much of the variance given the multitude of outside influences. Furthermore, the small effect can still mean large financial savings in the downstream effect in an industry that has tight operating margins.

The study results also provide support for a strong, significant link between service value performance and customer perceptions of service. This finding aligns with prior research in the service profit chain literature (Liao & Chuang, 2004; Rucci et al., 1998) and makes practical sense in the QSR industry. This research supports the relevance of the QSR industry working consistently to meet the speed and service standards promoted in its title (Kacmar et al., 2006). A critical organizational outcome expected from restaurant operators involves growing the customer base by providing exceptional customer service and an expedited dining experience (Boje & Rhodes, 2005). Such a customer focus by store operators is vital because of the alleged strong, positive impact of customer growth and return behaviors on sales and profits within the service and hospitality sector (Heskett et al., 1994; Rucci et al., 1998). This study confirms this reasoning, as the relationships between customers and the sales and profit constructs were significant and positively associated. Not only did customers’ perception of the service link positively to financial measures in year 1, but also the customer construct was positively associated with comparable sales growth in year 2. This indicates that current year customers’ perceptions can positively influence financials not only in the current year, but also in subsequent years.

This research shows that practitioners should develop strategies and programs that foster engagement in the workplace. The direct and significant link found among the employee, service value performance, customer, and financial measures is important to note in the service sector. Often in the QSR industry, as a result of the highly competitive labor market, performance is stimulated through competition-based recognition and incentive pay, which can be costly to an organization (Enz, 2004). These types of programs often motivate employees to beat

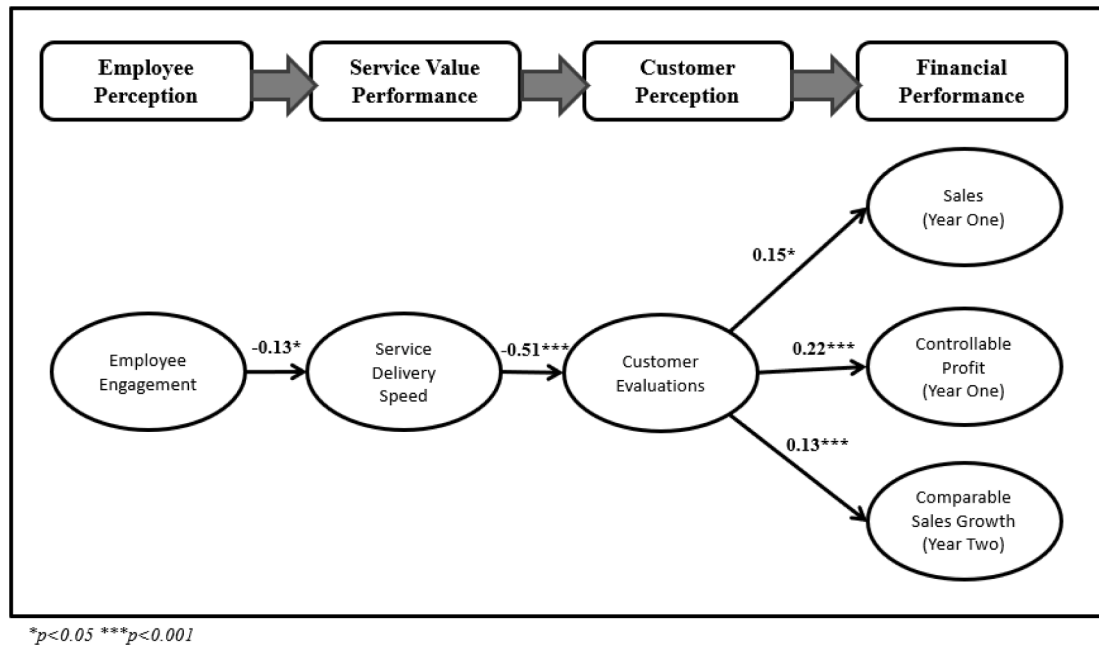


Fig. 2. Structural model.

their past performance or other employees', restaurants', or markets' performance to drive increased financial results. Kahn's (1990) seminal work on employee engagement details three conditions required for employees to engage in their role: safety, availability, and meaningfulness. With this understanding of the engagement construct and the increasing labor costs restaurants already face, human resource professionals can implement programs that focus on building managers' capacity to foster the psychological conditions (i.e., safety, availability, and meaningfulness), as outlined by Kahn, in the restaurant. As managers learn how to engage their staff by fostering these environments from a day-to-day perspective, organizations may become less reliant on costly competitive-based incentives as a main driver of performance.

Researchers have endorsed employee engagement as a key source of competitive advantage and have suggested that it can influence the success of organizational development, training and organizational learning, career development, performance management, and strategic change process initiatives (Wollard & Shuck, 2011). Given the relevance of and interest in employee engagement, the findings from this study extend the literature and further illustrate the impact of engagement on the financial and operational performance of a QSR restaurant. Additional research in this field would be beneficial for both researchers and practitioners as they continue to identify what truly affects and what is affected by employee engagement.

6. Limitations and future research

Since Kahn's (1990) work, researchers (Menguc et al., 2013; Salanova et al., 2005; Xanthopoulou et al., 2009) have examined the employee engagement construct in service organizations. This research study extended the employee engagement literature by solidifying the direct impact of engagement on service value performance and the organization as a whole through direct links in the chain. However, as with all studies, this research had limitations that future research might try to overcome. The limitations offer guidance as further research is necessary to strengthen the understanding of the engagement phenomenon.

First, future research should evaluate the long-term relationship between restaurant-level engagement and financial and operational performance. A limitation of this study is the use of a cross-sectional design, as it limits the ability to show causality among the variables (House, 1971). Longitudinal research designs are currently lacking in

the engagement literature and limited in the service profit chain literature. Future research could focus on longitudinal analyses to examine employee engagement in the service profit chain.

In addition to longitudinal research, temporal measurements particularly for engagement should be evaluated. In recent years, scholars have discussed whether engagement is a stable cognitive-affective attitude or an attitude that changes, potentially multiple times a day, in a way that may affect its relationship to common antecedents (e.g., job resources) and outcome measures (e.g., job performance). Many scholars have referred to this topic as state versus trait engagement (Sonnentag, 2011) or day-level versus habitual engagement (Schuafeli & Salanova, 2011), where state/day-level engagement measures intra-individual changes of engagement and trait/habitual engagement focuses more on the enduring stability of engagement over time. There is more to know about how, when, and why engagement influences performance constructs (Parker & Griffin, 2011), and evaluating integrated measures of state and trait engagement in a longitudinal study would be a worthy endeavor.

A second recommendation for research includes juxtaposing the employee engagement and employee satisfaction constructs in the service profit chain to determine which employee perception construct might be the best fit to use in the model or whether both constructs add unique associations to the chain. This study did not attempt to examine the nuances between employee job satisfaction, a more widely used employee perception construct, and employee engagement. It was not possible to examine every variable that may affect employees' perceptions and performance, customers' evaluation of their experience, or the organization's operational and financial performance, and thus additional insights, particularly into the employee constructs in the model, are warranted.

A third limitation pertains to the secondary nature of the data, which complicates the ability to generalize the findings (Bryman & Bell, 2007). Although collecting this type of data is cost-prohibitive, it would be beneficial to understand the perceptions of external sources using primary collection techniques.

Future research in the service profit chain literature should evolve to consider technology and potential augmentation and artificial intelligence (AI) as benefits or hindrances to employee performance and customer encounters in the chain. The employee–customer encounter in the service sector has advanced to include technology in more “complex

service systems,” and additional research is necessary to understand how these systems influence the entire chain (Larivière et al., 2017). Furthermore, the extension of Braganza et al.’s (2020) initial findings into the complicated relationship between AI and employee engagement is warranted. As augmentation and AI continue to progress and change the way work is undertaken in organizations, understanding the intricacies of any shifts or subsequent changes in the service profit chain because of the increase in technology is crucial.

Last, future research should include sampling procedures that collect responses from various types of QSR organizations to better support generalizability in the industry (Bryman & Bell, 2007). One way to do so is by evaluating the franchise community and equity groups in the QSR industry. Multiple QSR organizations are moving to an all-franchisee model, meaning they no longer have restaurant-level employees. Instead, these organizations are building their business through royalties based on their franchisees’ success (e.g., Chick-fil-A, Yum! Brands). In addition, many franchisees and even full restaurant chains (e.g., Taco Bueno, Burger King) are owned by equity firms. This type of model presents new challenges for organizations, including working to create a cohesive, operationally consistent dining experience for customers across different franchise groups and, at times, different restaurant brands in the industry. Although new challenges and a different employment relationship exists, many of the same business outcomes are sought. Given this information, researchers should consider measuring what antecedents and consequences exist when franchisees are engaged in their businesses and how that engagement is associated with relevant links in the service profit chain. This type of information would benefit the industry by providing franchise organizations a better view of the influence of engaged franchise owners on the financial and operational health of the organization.

As the focus continues to shift from research based on *whether* frontline service employees play a role in the financial and operational success of an organization to *how* they influence financial and operational success, a deeper understanding of the antecedents to employee engagement is warranted. Although an employee’s “preferred self” may seem to color engagement as an intrinsically determined state, extrinsic factors must be considered as well. An employee, no matter how personally willing or eager he or she is to be engaged in his or her work, may be influenced by his or her interactions with the work environment. Extrinsic factors are also important to consider, as the service industry searches for new, more holistic approaches to driving organizational and financial performance.

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