

Restaurant and foodservice research

Restaurant
and
foodservice

A critical reflection behind and an optimistic look ahead

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Abstract

Purpose – The purpose of this paper is to present a review of the foodservice and restaurant literature that has been published over the past 10 years in the top hospitality and tourism journals. This information will be used to identify the key trends and topics studied over the past decade, and help to identify the gaps that appear in the research to identify opportunities for advancing future research in the area of foodservice and restaurant management.

Design/methodology/approach – This paper takes the form of a critical review of the extant literature that has been done in the foodservice and restaurant industries. Literature from the past 10 years will be qualitatively assessed to determine trends and gaps in the research to help guide the direction for future research.

Findings – The findings show that the past 10 years have seen an increase in the number of and the quality of foodservice and restaurant management research articles. The topics have been diverse and the findings have explored the changing and evolving segments of the foodservice industry, restaurant operations, service quality in foodservice, restaurant finance, foodservice marketing, food safety and healthfulness and the increased role of technology in the industry.

Research limitations/implications – Given the number of research papers done over the past 10 years in the area of foodservice, it is possible that some research has been missed and that some specific topics within the breadth and depth of the foodservice industry could have lacked sufficient coverage in this one paper. The implications from this paper are that it can be used to inform academics and practitioners where there is room for more research, it could provide ideas for more in-depth discussion of a specific topic and it is a detailed start into assessing the research done of late.

Originality/value – This paper helps foodservice researchers in determining where past research has gone and gives future direction for meaningful research to be done in the foodservice area moving forward to inform academicians and practitioners in the industry.

Keywords Hospitality management, Restaurants, Food and beverage, Foodservice research

Paper type Literature review

Introduction

The research in restaurant management and foodservice has been devoted to a variety of subjects from the operations of the business, to restaurant design, to menu development, to the strategic management of foodservice operations, all the way to the human resource factors related to foodservice management. In the field of foodservice management, the context and variety of types of establishments can vary from fine dining restaurants, to foodservice operations within lodging operations, institutional dining venues and to the current trend of the use of food trucks, mobile food carts and even pop-up restaurants. The foodservice industry is inherent in all of the hospitality and tourism environments and



therefore knowledge about the operations of foodservice is critical to building the knowledge related to the entire hospitality and tourism fields.

Early prevalent research in the field was conducted primarily related to fast food in the 1980s, as that segment of the restaurant industry was growing and developing; prior to that the foodservice research focused predominantly on airline food, catered food, family dining restaurants such as Howard Johnson's and other roadside diners. Into the 1990s, much of the research focused on segmenting the restaurant industry, and research and consulting companies such as Technomic, Inc. were producing restaurant research for pay. The number of research articles pertaining to the restaurant industry has substantially increased over the past 30 years and more research is done on an almost daily basis related to the components of operations, service quality, restaurant finances, foodservice marketing and new and current trends such as menu labeling, new types of foodservice operations (food trucks, mobile carts and kiosks) and other areas. The prevalent themes in the restaurant and foodservice research areas over the past decade will be addressed in the current paper to show the direction that future research may need to go to continue to help the foodservice industry and expand on the knowledge previously gained.

Because of the evolution of the research in foodservice and restaurant management, this paper has been developed to review and compare the topics assessed over the past 10 years related to restaurant management and foodservice. It has been a big undertaking, but will hopefully spark discussion and discourse on the subject. The paper will review the literature in the key areas of: restaurant segments, operations, service quality, restaurant finance, foodservice marketing, innovation, food safety and healthfulness, and will briefly discuss recent trends in foodservice research.

This paper will begin by reviewing the work that has been done in the key areas noted above and it will then finish up by looking at the gaps in the research to identify areas for future research. This will be discussed to determine the general implications for future research moving forward. Finally, conclusions and recommendations are presented related to where foodservice research could go in the future to continue to inform academics and industry practitioners alike.

Evolution of research in foodservice and restaurant management

Foodservice research has become more prevalent over the past 30 years in both the hospitality literature as well as the business academic literature. During the most recent decade, the primary focus of this literature review, the research in foodservice and restaurant management has been in the primary areas of restaurant segments, operations, service quality, restaurant finance, foodservice marketing, innovation and food safety and healthfulness. There are some emerging topics that relate to corporate social responsibility (CSR), sustainability, menu labeling and food trucks, mobile carts and pop-up restaurants that have started to be researched as well. The areas of hospitality human resources, finances and strategic management research trends over the previous decade are reviewed in other papers in a great deal of depth (Harrington *et al.*, 2014; Jang and Park, 2011; Tracey, 2014).

The methodology used for the current paper was a review of all of the research articles written about foodservice topics in top tier hospitality journals over the past decade. Using content analysis, the research was synthesized into common theme areas to determine key research topics and to identify gaps in the research for future studies.

Topics in foodservice/restaurant research

Restaurant segments

There have been a variety of restaurant segments or categorizations identified over the years. An early, fairly comprehensive categorization of restaurant segments by type were:

fast food or quick service, midscale, moderate upscale, upscale and business dining (Muller and Woods, 1994). More recently, these segments have been expanded and more clearly categorized as: fast food or quick service, fast casual, family dining, casual or casual-themed restaurants, upscale casual, fine dining, business or institutional foodservice. The various segments of the restaurant industry are all diverse and categorized by such things as service level, food quality, menu variety and food types, as well as price. The addition over the past 15 years of the fast-casual and upscale-casual restaurant segments to the variety of restaurant categorizations has given researchers a more diverse way to look at service quality and guest expectations in the multitude of different types of service environments in restaurants. The fast-casual restaurant is a more healthy and fresh menu than the fast food restaurants with a décor that is nicer and more comfortable. The upscale-casual restaurant is nicer than the casual or casual-themed restaurant, but is not as expensive or service centered as the fine dining restaurant, thus adding to the levels of service and food quality provided by restaurant operations.

Each of the restaurant segments has a variety of attributes that are **distinct** from one another. Some of the attributes that vary by segment include the level and quality of service and the amount of customer participation in their own dining experience, the price, the quality of the food and the ambiance of the restaurant. The level of service, the quality of the food, the ambiance and the price all tend to increase as the restaurant moves up the segmentation from fast food to fine dining. The attributes that are **similar** no matter what segment the restaurant falls into are availability and access to the location, menu variety and cleanliness (Ha and Jang, 2012; Kivela, 1997). These attributes are the basic needs that have to be fulfilled for guests and have to be available in a positive way in any of the restaurant segments.

Many of the research studies done over the past 10 years have not worked to identify or re-categorize restaurant segments in the industry in general, **but most research studies have specifically analyzed one type of restaurant segment or another**. For example, studies recently have primarily focused on casual or casual-themed dining restaurants due to their relative importance and size in the market (DiPietro and Milman, 2008; DiPietro and Partlow, 2014; Dziadkowiec and Rood, 2015; Madanoglu *et al.*, 2008; Murphy *et al.*, 2009; Murphy and Olsen, 2009; Peng *et al.*, 2015; Weiss *et al.*, 2004). In general, **casual dining** restaurants that are part of a chain have been perceived by guests as being more like **fast food restaurants with faster service** and more moderate prices than independent casual restaurants. In general, casual dining restaurants meet the expectations of customers (Dziadkowiec and Rood, 2015) with the food and service being the two most important attributes as gleaned from research with casual dining restaurants. These types of restaurants are thought to create more of an overall experience for customers rather than just providing a meal (DiPietro and Partlow, 2014; Peng *et al.*, 2015).

More recently, the fast-casual restaurant segment has been a focus of research due to the growth of this restaurant segment in the late 1990s and the growth during the recent recession, as people had to dine at less expensive locations, as the amount of disposable income had declined (Ryu *et al.*, 2010, 2008). These studies have found that the restaurant image at the fast-casual restaurant level impacts value perception by the customers. The value perception by the customer ultimately impacts their satisfaction and behavioral intentions (Ryu *et al.*, 2010). Another study found that food, service and physical environment of the restaurant directly impacted satisfaction with the restaurant, and price moderated that relationship in fast-casual restaurants (Han and Ryu, 2009). Several studies in fast food restaurants have also informed the research related to foodservice attributes and satisfaction (Ha and Jang, 2013; Ogaard *et al.*, 2005; Ottenbacher and Harrington, 2009).

In a study that compared fast food with casual dining and fine dining restaurants, [Ha and Jang \(2012\)](#) looked at the consumers' perception of dining value. They further assessed dining values of customers at the various types of restaurant segments ([Ha and Jang, 2013](#)). This study found that fast food restaurants should try to maintain their performance in convenience/efficiency value and quality/excellence value. They found that casual dining restaurants were performing well in emotional value to the guest as the guest and the restaurant were connected in a way that helped them to feel emotionally connected. Fine dining restaurants had more epistemic value to guests, meaning that guests want to expand their knowledge and experiences with food and are able to do that through the environment and service style of a fine dining restaurant. Fast food restaurant guests do not place a high value on the experience of dining, but rather the convenience and efficiency of the experience ([Ha and Jang, 2012](#)).

More recently, it has been undertaken by some researchers to try to categorize restaurants into more specific and distinct segments to allow for more appropriate benchmarking and research comparisons rather than just using the traditional segmentation ([Barrows and Vieira, 2013](#); [Canziani et al., 2016](#)). The new classification system that Barrows and Vieira proposed looks at multiple operational factors instead of only things such as service factors and price, which provided the traditional basic classification. Their classification system more closely assessed the service level of the restaurant, the menu type and average check. Overall, their classification system derived a total of six clusters of restaurants: fine dining, casual/upscale casual, quick service, sandwiches/casual, pizza and cafeteria/buffet ([Barrows and Vieira, 2013](#)). A recent study by [Canziani et al. \(2016\)](#) assessed the categories in restaurants to be: foodservice sector, service mode, menu/dining styles, specialty descriptors (for example, casual, themed, ethnic) and finally ownership status of the restaurant. They proposed that the more narrow the category, the more accurate the ability to research and compare restaurants would be.

Business and institutional dining was seen in the 1990s as one of the fastest growing segments in the foodservice industry with a unique, limited growth potential framework. Many organizations saw bringing food to their employees as a benefit, while others saw it as a convenience and necessity for their employees ([McCool et al., 1994](#)). One current study in this area assessed the benchmarking that managers in institutional dining operations used related to operations, financial and customer service measures ([Bright et al., 2009](#)). Despite the fact that the overall model of the institutional dining operation is slightly different than the freestanding restaurant, the basics are the same. Service, food quality and prices have to match the expectations of the target market customer.

One other restaurant segmentation that has been specifically identified and studied more in recent years is the ethnic restaurant and that has been studied in relation to comparing to nonethnic restaurant attributes, customer perception and the relationship to authentic characteristics ([Clemes et al., 2013](#); [Ha and Jang, 2010](#); [Jang et al., 2012](#); [Roseman et al., 2013](#)). This area of research is one that is anticipated to grow as ethnic restaurants become more mainstream and important in the landscape of restaurant segmentation.

General trends in the research that defines the restaurant segments are that much of the research is categorized by the topic being studied related to the restaurants rather than specifically studying the overarching category of a restaurant's segment. The context of the research is typically not the restaurant segment, but rather any of a number of components that get studied related to restaurants such as human resource issues, operations, finance, etc. The majority of the research done over the past decade has been based in fast food restaurants and casual dining restaurants. This may be caused by the increased access to these restaurant segments, the large number of the restaurants or the more distinct features

of looking at counter service versus full service restaurants. Fewer of the research studies have been focused on the other segments of the restaurant industry, but this is changing as the fast-casual restaurant model is continuing to evolve. The one notable exception to this is the Barrows and Vieira (2013) article that specifically recommends a new classification system for restaurants.

Another topic of primary interest during the past has been in the area of restaurant and foodservice operations. This area has developed out of an interest in studying how restaurants can operate more effectively and efficiently. Because of the variety of segments of foodservice that have been identified and because of the numerous variables that have to be accounted for in controlling operations, the study of restaurant operations is critical to help inform practitioners of best practices and to recommend future areas of research opportunities. The following section discusses the key research that has been done in this area of foodservice operations.

Restaurant and foodservice operations

The operations of restaurants and foodservice organizations have changed as the types and styles of restaurants have evolved. The once personal service of the roadside and home town diners have given way to a more varied form of service that often involves counter service, self-service and the use of technology that has helped to engage guests on different levels rather than just through the service level provided by the use of table service. Trends in the research related to restaurant operations over the past decade have looked at key success factors in restaurants and the potential myth of restaurant failure during the first year, technology use in the restaurant and foodservice industry and how that has changed the operation of the restaurant and the interaction between the guest and employee, as well as the role of sustainability in the operations of the restaurant and the perception of the guests related to the restaurants that use green practices. It can only be surmised that the next decade will bring more research in some of these areas, but will also look at other operational issues that may come up because of the ever-changing and evolving foodservice landscape.

Parsa *et al.* (2005) found that the myth of 80-90 per cent of restaurants failing in their first year was just that, a myth. They found in a study of restaurants in Ohio that only 26.26 per cent of independent restaurants actually failed in their first year and that the characteristics of a lack of or poorly defined internal strategy, culture and operational savvy had more to do with the failures than the external environment did. This research showed the importance of internal processes and knowledge sharing within the company compared to the long-standing thought that the location of the restaurant was the only important factor in a restaurant's success. This research was important, as it expanded a stream of research in success factors of restaurants.

A number of studies beyond Parsa *et al.* (2005) have assessed the success factors of restaurants in determining which restaurants are more likely to succeed or not (Mamalis, 2009; Mandabach *et al.*, 2011). Overall these studies have found food quality, service quality and facilities or the environment of the restaurant were all confirmed to be key success factors in whether restaurants succeed. These findings have verified and added to the depth of research on the subject of key success factors. The more recent additions to the keys to success in the restaurant industry are the factors of adaptability to the locality of the restaurant, the fact that the restaurant is perceived as the place to be and the sales incentive program that the restaurant has set up with its employees. The Mandabach *et al.* (2011) study found that the influence of the product served is important in restaurant success, but also keeping in mind the external factor of customers is critical to success. This research shows that restaurants that keep customers' needs and expectations in mind tend to be successful.

These findings are supported by previous literature in the area of success for restaurants (Scanlon, 1998).

Self-service technology is a method to improve operations in a variety of industries, and the foodservice industry is also taking advantage of the use of more self-service additions to improve upon the service provided to guests (Ruiz-Molina *et al.*, 2014). Because of the declining numbers of good service providers and the increased ability for guests to help participate in creating their own experience in a restaurant through the use of technology, the advances made by the foodservice industry can enhance dining experiences. Kincaid and Baloglu (2005) did a study early on at the advent of the use of self-service technology in the casual dining restaurant industry and found that there was a strong appeal to guests in using the technology and that there were opportunities for restaurant organizations to gain personal information about their customers through the use of this technology that allows them to target more specific marketing campaigns to them. Since this early study's time (2005) there has been more widespread adoption of self-service technologies such as tableside use of tablets in restaurants to smart phone apps that allow you to put your name on a waiting list for a restaurant or to make reservations, or to even check for restaurants that have discounts or coupons at the current time. Most of the self-service technology that is out there in general is enhancing the overall experience of the guest.

Not all restaurants are using technology solely for the purpose of increasing their customer service though. There are many reasons for restaurants to utilize technology, one of these is to control the operations more efficiently through inventory or reservation management systems, another reason is to expand marketing efforts through the use of technology, but in addition to this, there are many uses that can enhance the productivity of the back of the house to ultimately improve overall performance of the restaurant (Huber *et al.*, 2010). The results of the Huber *et al.* (2010) study found that most restaurants used technology for sales analysis, but the usage of the other possible features of technology were dependent on the success level of the restaurant – the more successful the restaurant, the more they used technology for analysis of their data.

Sigala (2003) and Ruiz-Molina *et al.* (2014) looked at the role of information and communication technologies in the restaurant operations area. Sigala (2003) looked at the productivity of organizations and the relationship with their information technology adoption. Her study found that there have been mixed results in the past literature regarding the benefits of technology adoption. Her study of the foodservice operations of three-star hotels in the UK shows that unless an organization has a strategic and integrated program related to technology adoption and unless they use technology focused on the intangible (financial analysis) and tangible (service quality) components of the operation, there will not be any productivity advantage to it.

More than a decade later, Ruiz-Molina *et al.* (2014) assessed the uses of technology in restaurants and found that there have been many additional uses for technology since Sigala's initial (2003) study. It was determined that technology now can help with the entire process of restaurant operation and management from sourcing of products to incident management to tracking customer profiling data and customer relationship management information. In this more recent study and other similar studies (Mozeik *et al.*, 2009), it is evident through the data that restaurants are adopting much more technology to improve their efficiency (such as the use of personal computers, digital and mobile phone applications, liquid crystal display (LCD) screens, wireless networks, design software and online security systems). The information technology solutions that have been developed of late apply to a wide variety of restaurant styles and needs (Ruiz-Molina *et al.*, 2014).

Other research on technology impacts in the restaurant industry has been done by [Mozeik et al. \(2009\)](#) and has shown that [customers perceive mobile devices to have more ease of use related to restaurant services than laptops or computers](#). The use of mobile devices such as cell phones or Blackberries, even in 2009, was perceived as a more effective means of communication between the restaurant and guests. The study found that customers needed to perceive the ease of use of technology to be very simple and convenient for them to use, and handhelds continue to be easier to use than desktop or laptop computers which are more cumbersome to have available for use. Future technology use will have to center on the customer (the end user) and the handheld or mobile devices that will help connect the guest with the restaurant ([Mozeik et al., 2009](#)).

Another topic of interest in the research related to restaurant operations is sustainability, green practices and CSR. CSR and sustainability in restaurants and the role that this topic plays in restaurant operations and guest perceptions has been studied over the past decade like never before ([Chou et al., 2012](#); [DiPietro et al., 2013](#); [DiPietro and Gregory, 2012](#); [Dutta et al., 2008](#); [Hu et al., 2010](#); [Jeong et al., 2014](#); [Xu, 2014](#)). Overall, these studies on restaurant patronage and guest perceptions of green restaurants, as well as corporate social responsible practices have found that guests are becoming more aware of issues related to sustainability in their everyday lives and [they are starting to look at the sustainable practices of the restaurants that they patronize](#). In general, customers appear to be interested in restaurants [implementing green practices](#), but they are not willing to pay much more for those practices. There is also a common focus in the research studies that restaurants need to be more focused on specifically marketing the practices that they do implement, as many people are not aware of what restaurants are currently doing. Another finding is that employees need to be trained in communication of the information related to green practices to customers. Other common findings are that more educated female respondents were more interested in green practices ([DiPietro et al., 2013](#); [DiPietro and Gregory, 2012](#); [Dutta et al., 2008](#)).

Some other studies on sustainable practices in the restaurant industry have to do with the perspective of the [restaurant and management related to these practices](#) ([Chou et al., 2012](#)). The [Chou et al. \(2012\)](#) study found that restaurants that have a positive attitude and perceived behavioral control adopt green practices at a higher level. They found this through using the innovation adoption perspective and the Theory of Planned Behavior. This study found that social influence was not a factor in the decision. They also found that innovative companies were more apt to adopt green practices in their businesses, and companies that believed that the green practices would have positive benefits on the company also adopted practices more readily ([Chou et al., 2012](#)). These topics will continue to need to be assessed in future research as Generation Y continues to be more demanding related to corporations taking responsibility for their actions and for their inactions in certain areas.

These operational issues will continue to emerge and evolve over time and therefore will still be areas of research and practical interest. The following section will assess the research that has been done in the area of service quality over the past decade.

Service quality

Much of the research done in foodservice has been related to guest perceptions of service quality and service attributes. Back in 1970, Hurst initially brought up that restaurants have to sell an experience to guests and not just food. This initial article was the foundation for additional research articles on the topic of creating an experience and involving the guest in the production process to help improve the productivity and operations of the restaurant ([Ford and Heaton, 2001](#); [Romm, 1989](#); [Susskind, 2010](#)). This stream of research shows that all

restaurants and service organizations need to create an experience to have a competitive advantage over their competition.

Restaurant research related to service attributes that helped with creating a great experience for guests has been around for many years. The original service quality attributes research was developed as a scale called SERVQUAL (Parasuraman *et al.*, 1988). The original research on service quality in organizations was done using a 22-item scale that assessed the five dimensions of service quality: tangibles, reliability, responsiveness, assurance and empathy. The research looks at the expectations of customers and the perception of the performance of the organization regarding their overall service (Parasuraman *et al.*, 1988). This research was used as a foundation for much of the research to come after that in assessing guests' quality perceptions. DINESERV was developed out of SERVQUAL to focus on the restaurant and foodservice industry and to take into account the unique features of those types of organizations (Stevens *et al.*, 1995). The DINESERV scale added items specific to the restaurant industry such as items related to dining room, server dress and quality, food quality and preparation (Stevens *et al.*, 1995).

Using the framework of DINESERV, many researchers have looked at the attributes of service quality and food quality and found a positive relationship with customer satisfaction and repeat intention in the restaurant industry (Bujisic *et al.*, 2014; Namkung and Jang, 2008; Ryu *et al.*, 2012). The primary attributes of customer satisfaction in the restaurant industry across restaurant types are food quality and to a large extent, service quality (Bujisic *et al.*, 2014; Mattila, 2001; Perutkova and Parsa, 2010). Ha and Jang (2010) also found that atmospherics moderate the relationship between service quality and food quality in ethnic restaurants. Overall the findings related to service quality have not changed dramatically over the years, but the expectations of guests have increased and the requirement of perceiving a value in restaurants by customers has been more important in recent years.

A more recent service quality, multidimensional scale has been developed for fast food restaurants by Wu and Mohi (2015). Their research developed a model that adds a component of interaction quality, composed of interpersonal interactions, problem-solving skills and professional skills, that the other service quality scales do not have. The other components that the model is composed of, physical environment quality and outcome quality, are similar to the other scales developed previously. These constructs and items comprising them can be assessed to help fast food restaurants determine where to focus their energies and resources to improve the quality of service. The study finds that as perceptions of service quality vary across different geographical regions and types of restaurants, it is important to look at specific needs of individual guests and how they think, feel and behave (Wu and Mohi, 2015).

Namkung and Jang's (2008) study looked at the characteristics of a restaurant that were related to customers that were highly satisfied. Their finding echoed others in that food quality and service quality were important, but they also found that the servicescape, including seating arrangements, background music and fascinating interior design, all helped with creating an environment that was related to customers being highly satisfied. This study encouraged more studies on servicescape and environment of the dining experience (Kim and Moon, 2009; Lin and Mattila, 2010; Ryu and Jang, 2008). Ladhari *et al.* (2008) also assessed dining satisfaction and found that positive emotions and perceived service quality predicted dining satisfaction. Other statistically significant predictors of satisfaction were menu presentation, furnishings in the restaurant, as well as the music being played in the dining environment.

In looking at the relationship between the employee and the guest and how they work together to help create higher levels of guest satisfaction, Susskind *et al.* (2007) developed the

Guest-Server-Exchange model and determined that if servers had a higher level of support from their workplace and had a higher guest orientation, the guests that came into the restaurant ended up having higher levels of satisfaction. They found that there was a strong connection between the organizational elements related to employees' ability to do their jobs, employee behavior and guest outcomes.

Perception of **waiting time** has also been studied in restaurants – how does a restaurant stay full without causing a certain number of guests to wait in line? This research found that using the menu and menu information as a distractor to provide information to guests caused their perceived waiting time to be less than their actual waiting time (Bae and Kim, 2014). The use of technology has enabled restaurants to have people call ahead or use a restaurant application to put their names on a wait list and then the restaurant can text their phone when the table is ready and this can help the guests to minimize their actual and perceived waiting time. The use of mobile apps is on the rise in restaurants today and it is anticipated that this will become a more developed research topic in the future.

Service recovery research has been done in a variety of ways including through qualitative, quantitative and conceptual papers designed to help restaurant operations to uncover the best ways to resolve issues (Dutta *et al.*, 2007; Kim *et al.*, 2010; Magnini and Ford, 2004) and is defined as an action performed by an organization to resolve service failures (Zeithaml and Bitner, 2000). Service recovery research has found that as guests encounter a problem, they are likely to return and even to recommend the restaurant to others if there is a form of service recovery that includes an apology, but more importantly a financial or compensatory fix of the problem (Dutta *et al.*, 2007). Contradictory research has been done that found that financial fixes or compensation is not needed, but more contact between the customer and the service provider minimized the damage of a service failure (Silber *et al.*, 2009). Either through financial incentives or increased contact between the guest and organization, this concept of using a service problem to turn a guest into a loyal guest and advocate of the company is called the recovery paradox.

In an update of older service recovery research, Warden *et al.* (2008) assessed that there were recovery actions that organizations could take to try to keep guests satisfied: free food or discounts/coupons, management intervention, replacement of orders, correction of error, apology or no action. Earlier research in this area typically had just included compensation strategies, assistance strategies and no action strategies, so this current research expanded the types of ways that service businesses can respond to problems that occur. The Warden *et al.* (2008) research found that strategies related to actions taken to resolve the issue and communication with management and employees were best to resolve complaints and get guests to return rather than using compensation or no action at all.

More recent research in the area of service recovery has looked at a concept called **error management** and the employee role in the use of helping behavior and how it impacts service failures and recoveries in the restaurant industry (Guchait *et al.*, 2015). The researchers have found that there is some value in trying to prevent or minimize errors from occurring, keeping in mind that it is virtually impossible to eliminate errors completely from the service industry. Instead, they performed research on the concept of error management and try to turn a negative into a positive. The study found that when organizations have an error management culture, the employees not only exhibit helping behaviors, but receive help from others in trying to resolve guest issues. The study also found that an error management culture was also positively related to firm performance (Guchait *et al.*, 2015).

Other research found that the **primary issues that were the cause of service failures** were found to be inappropriate server behavior, slow service and food spillage (Silber *et al.*, 2009). They also found that the most effective strategies to encourage guests to return were

increasing service interaction rather than strategies that included monetary compensation. This research echoed the findings of Warden *et al.* (2008) and showed that customers really just want to have their issues resolved and that can turn a negative into a positive and give them reasons to return to the restaurant again.

Perceived service fairness was studied by Namkung *et al.* (2009). They found that in a study of casual, all-inclusive dining restaurants, that there was a four-factor model of service fairness including: price fairness, procedural fairness (time spent on resolution of the problem), outcome fairness (how fair the customer perceived the resolution of the issue) and interactional fairness (how the customer was treated). Previous models of service fairness and justice typically just looked at three factors (distributive fairness, procedural fairness and interactional fairness), but neglected to assess how the customer perceived the fairness of the price in comparison with the experience.

Further research into service recovery and fairness looked at how guests perceive the recovery efforts and compensation when errors in the service occur, as it relates to equity and justice (Ha and Jang, 2009; Kwon and Jang, 2012). The research in this area shows that customers perceived high recovery efforts by companies to be related to stronger perceived justice and equity. Feelings of perceived justice were related to behavioral intentions (Ha and Jang, 2009), but in research with varying compensation levels, perceived equity was not directly related to behavioral intentions (Kwon and Jang, 2012). Research also found that stronger relationship quality with the company moderated the relationship between perceived justice and behavioral intentions (Ha and Jang, 2009), but in the study with compensation methods, customers with low relationship quality found financial or product compensation to be an effective strategy to increase behavioral intention (Kwon and Jang, 2012). This shows that organizations should do some research to determine how to best resolve errors in service to be effective in the resolution of these errors with customers.

Studies have looked at service guarantees and their effectiveness and impact on the organization and guest (Lee and Khan, 2012). Their study looked at casual dining restaurants – branded and independent. The impact of the service guarantee on perceived purchase risk, loyalty, word-of-mouth intent and intent to complain were assessed in the study. It was found that offering a service guarantee was a positive influence on customers' selection of a restaurant and that they were more important for an independent restaurant to use versus a branded chain restaurant. The study also found that a specific service guarantee was more important in influencing perceived purchase risk, loyalty and intent to complain rather than an unconditional service guarantee. A well-executed service guarantee helped increase customer loyalty and word-of-mouth intention. The study found that it is better to have a limited service guarantee that is well executed rather than an unconditional service guarantee that is not well executed (Lee and Khan, 2012).

In general, service research in the foodservice industry has focused on three primary areas: service quality attributes of foodservice (including food quality and overall service quality), service recovery and perceived service fairness and guarantees. Future research in this area will likely address the role of technology in service and examine the potentially changing service needs of the newer generations. The following section summarizes the research done in the restaurant and foodservice finance area over the past decade.

Finance

The research related to finance in the restaurant industry looks at a variety of topics from traditional accounting (Jang and Ryu, 2006; Kim and Gu, 2006), ownership in the restaurant industry (Dalbor and Upneja, 2007; Madanoglu *et al.*, 2008; Roh *et al.*, 2013; Upneja *et al.*, 2008) and financial risk in the restaurant business (Jang *et al.*, 2011). CEO turnover and

executive compensation have been assessed to determine their impact on the financial performance of foodservice companies as well (Barber *et al.*, 2009; Demirer and Yuan, 2013).

Another area of research of late has been how financial factors are related to firm performance (Mao and Gu, 2008). Mao and Gu (2008) found that restaurant companies that had a low debt leverage had better firm performance, as measured by past firm financial performance and anticipation of future financial performance, than those firms that had a higher debt ratio. This means that the cost of using debt was more than the benefits accrued from incurring that debt. Also, using more retained earnings for internal financing instead of using external financing was beneficial for organizations, and lowering financial risks tends to increase investors' rate of return. This study was done during the years surrounding 9/11 (data collection done between 2000 and 2004), and so, it may look different if the study is duplicated in the future. In general though, the study found that reducing debt leverage increased the performance of the company. Other studies that have looked at restaurant financial performance (Assaf *et al.*, 2010; Parsa *et al.*, 2005) also show that larger restaurants tend to be more efficient than smaller restaurants possibly due to efficiencies of scale, and restaurants with stronger management tend to be more productive and efficient as well (Assaf *et al.*, 2010).

More research in this area was done related to benchmarking firm capabilities to maintain sustained financial performance or to turn around poor financial performance of organizations (Hua and Lee, 2014). Previous research discussed above shows how financial measures can influence firm performance and vice versa, but the Hua and Lee (2014) study shows how benchmarking firm performance measures can help sustain performance in the long term. The areas that firms need to assess versus benchmark firms are rent expense, inventory control and liquidity control. If companies can control the amount of rent that they pay, they tend to have more flexibility in how they spend that additional income. If the companies can keep inventory expenses controlled and therefore have a higher inventory turnover, they do not have as much sitting in inventory not being utilized efficiently. Liquidity control means that firms have more liquid funds and do not tie up their money too tightly by over-expanding and losing some of their liquidity and therefore financial flexibility (Hua and Lee, 2014). To help the financial performance of foodservice organizations, it is important to look at how firms control their expenses, but also how they can increase their revenues.

The concept of revenue management was introduced to the foodservice industry related to the flow of revenue through the operation by Dr Sheryl Kimes in 1998 (Kimes *et al.*, 1998; Kimes and Wirtz, 2002). Research in the area of revenue management has included looking at how technology has impacted revenue management (Kimes, 2008) as well as perceived fairness of demand-based pricing, for example, using the revenue management principles that are prevalent in the lodging and airline industries in the foodservice industry (Kimes and Wirtz, 2002). This research has shown that similar to the lodging and airline industry, customers can understand why certain times of the day or week can be priced differently. Customers think that it is fair if different dayparts or different days of the week are priced differently than others and are, therefore willing to pay more for peak times, but want to pay less for the less busy times.

Another stream of research has looked at the way that the economy impacts the restaurant industry and how the restaurant industry's key economic indicators have been impacted by the recessions and economic downturns over the past 40 years (Lee and Ha, 2012; Zheng *et al.*, 2012). The research done by Lee and Ha (2012) showed what seems intuitive, that casual dining restaurant sales increase when the economy is stronger and that their sales are cyclical and vary similarly to the gross domestic product (GDP) of the country.

Sales at full service restaurants are dependent upon the disposable income of customers. The results of the [Zheng et al. \(2012\)](#) study echoed these findings and also determined that limited service restaurants are fairly recession proof as these restaurants were not impacted by the downturns in the economy. These findings show that the type of restaurant can determine how or if a restaurant is impacted by the economic environment around them.

Another focus of the research done in the financial area of foodservice research is related to menu pricing and how pricing strategies can impact the restaurant industry. Key research in this area is from [Yang and Chang \(2011\)](#) who looked at strategies for menu pricing and analysis. They found that there are a number of ways to determine menu pricing and that one of those ways is to look at profitability and availability on the menu, that carefully controlling these two things can ensure the most benefit from a menu item. Research done by [Naipaul and Parsa \(2001\)](#) and [Hu et al. \(2006\)](#) looked at price endings for menu items and the perceptions that guests have based on the ending digit of a menu price. This research found that consumers use pricing as a way to determine the quality of a product where food prices ending in even dollar amounts are perceived as high quality (i.e. fine dining) and menu items ending in 9 tend to be perceived as having low quality. Conversely, those items ending in even dollar amounts were perceived as low value and endings in 9 were perceived as having high value (i.e. fast food) ([Naipaul and Parsa, 2001](#)).

A recent study [Linassi et al. \(2016\)](#) looked at the concept of **menu engineering and activity-based costing**. The study is done on the premise that tourists do not plan their trips without putting some thought into where and what they will be eating while traveling. Food is an important component of a trip, and to ensure successful longevity of restaurants, the cost factors involved in preparing and pricing menu items have to be well thought out. Menu engineering was developed a long time ago to help with financial success of the restaurant. Activity-based costing is a method that looks at the relationships between the various resources in an organization and strategically assesses the best use of the resources of an organization at a point in time. For example, if labor costs are high, the food costs for the menu item may have to be decreased or vice versa to ensure the restaurant is going to be successful in its pricing of menu items. This study **leaves room for further follow up research** in the areas of menu engineering, pricing and costing and activity-based costing by the restaurant industry and other service businesses.

Overall research in the finance area of foodservice and restaurant management has found that finances and firm performance are related, revenue management is a concept that can and should be used in the restaurant industry, as it has helped increase the efficiency in the lodging and airline industry for years, and menu pricing and pricing strategies are related to the success of foodservice operations. Key trends in the marketing of foodservice operations are discussed next.

Marketing

The menu has been a research topic for a long time, as it is the primary source of communication and marketing in the restaurant ([McCall and Lynn, 2008](#)). The research shows that the terminology used in a menu influences perceptions of quality, price expectations and purchase intentions. The more complex the menu description, the more customers perceive that the menu items are higher quality and they will have a higher likelihood to choose that restaurant. The menu communicates a lot to customers related to the menu items, the theme of the food and menu items and the pricing of the menu items which all relate back to the quality and value proposition that the restaurant is trying to communicate to customers.

Using bundles or packages to promote menu items has also been an area of study in the marketing literature related to restaurants. The addition of bundling healthy menu items has been studied by [Hur and Jang \(2015\)](#) to determine the relationship between the positioning of a healthy menu item in a bundle (anchor or tie in) to the perceived healthfulness of the menu by customers. This study found that the menu composition in a bundle influenced the perceived healthfulness of the menu item bundle, but the health claims alone did not influence customers' perceptions of healthfulness. This study also showed that using a menu bundle hinging on a healthful menu item is a stronger marketing tool than just creating menu bundles equal in calorie counts. Further studies looked at the promotion of healthy menu items and how that impacted dining values ([Jeong and Jang, 2015](#)). [Jeong and Jang \(2015\)](#) assessed how focusing on hedonic or utilitarian values tend to give customers different perspectives on healthy food item promotions. If looking through the hedonic lens, the customers valued the marketing communication to be about the long-term benefits of healthy eating. If they looked through the utilitarian value perspective, the customers preferred marketing to be directed at the more immediate benefits of the healthy food advertising. The value lens that the customer uses determined what type of marketing and communication would be best to convey a message of healthfulness.

Studies of coupon use to market and encourage repeat patronage in restaurants has also been studied ([Myung *et al.*, 2006](#)) and shows that coupon promotion by a restaurant does not have a significant relationship with the customers' repeat intentions. They found that ultimately the best indicators of return intention were quality of food and service ([Myung *et al.*, 2006](#)).

Relationship marketing has been a subject studied in restaurant management for a long time as developing a relationship during the short time that a person is in a restaurant is an essential component to being successful ([Robinson *et al.*, 2005](#)). This research looked at more than 30 articles on restaurants and the use of relationship marketing as a part of their strategy and they found that even with the time constraints of fast food restaurants and their goals of quick service, they can still develop a relationship or a connection with guests. In doing so, they may need to use humor in their ads, have more personable greetings or interactions with customers within their short timeframes or create an attachment with their customers through print media or commercials or even via electronic media to ensure that customers remember them when seeking a restaurant in the future. The concept of relationship marketing is creating some kind of connection with the customers and it helps to ensure satisfaction, brand equity and loyalty ([Robinson *et al.*, 2005](#)). Part of this relationship marketing is also the area of research related to internal and external marketing, for example, marketing to internal customers (employees) as well as external customers (guests) ([Lin and Lin, 2010](#)). This study found that positive internal marketing to employees can help create employee satisfaction which in turn has a positive impact on customer satisfaction. These internal customers (employees) become loyal when they believe that the company is helpful to them, thus creating a positive work environment. External marketing brings people into the restaurant in the first place, but positive experiences with the employees will keep them as loyal patrons for the long term.

A recent study done on brand attachment and behavioral loyalty furthers the research in relationship marketing ([Bahri-Ammari *et al.*, 2016](#)). This study showed further the connection between developing a relationship with the customer through brand attachment and how that positively influences behavioral loyalty. In the luxury restaurant segment specifically, the study showed the importance of developing positive relationships with customers through connections with them. Increasing satisfaction and nostalgic connections with people will increase their repetitive buying behavior ([Bahri-Ammari *et al.*, 2016](#)).

There have been research studies done on how people make choices on where to dine and what type of marketing helps their decision-making, and these studies have shown a variety of things to be important including word-of-mouth information sources ([Harrington et al., 2013](#)). This study also found that the reputation of the restaurant and external ratings, for example, the Michelin or Zagat restaurant/food guide influenced where people went to dine. The findings of the study determined that the order of importance of the following tools for marketing restaurants were as follows:

- recommendation from friends (word of mouth);
- reputation of the restaurant;
- recent reviews in newspapers or magazines;
- ratings in food guides; and
- comprehensive websites.

This shows the importance of a diverse array of communication and marketing to customers to influence their selection of restaurants.

How long marketing lasts or the duration of marketing effects have also been a topic of research of late in the restaurant industry ([Park and Jang, 2012](#)). Although the research is exploratory in nature, the study showed that advertising had a short-term effect on sales growth, and not a long-term effect. Despite the more short-term effect on sales growth, the study showed that the impact of advertising and marketing on the intangible value of the company was both long-term and short-term in nature, thus showing the importance overall in marketing and advertising for restaurant companies.

The use of internet marketing really took hold of the literature and research in the decade starting in 2000 ([Dev et al., 2010](#)). The use of the internet began to be written about before 2000, but in 2000, [Shock \(2000\)](#) described the number of consumers using the internet to search for information about restaurants, among other things. At that time, the penetration rate of users of the internet was approximately 50 per cent, with the lowest markets only at a 30 per cent penetration rate ([Shock, 2000](#)). The article talked about ensuring that you use lots of space and “friendly” pages to attract customers to your website. Now the use of the internet and mobile applications for finding information, making reservations and viewing the menu of restaurants is a common occurrence.

[DiPietro et al. \(2012\)](#) studied the use of social networking sites restaurants and found best practices in the use of social networking in the restaurant industry through an analysis of chain restaurants. They found that there were no consistent programs for the use of these sites at that time. The best practices at the time of the study were that the use of social networking sites such as Facebook and Twitter were used for finding employees at a relatively low cost, obtaining feedback on new menu offerings, connecting with employees and communicating with customers through contests, conveying information and making announcements about new menu items or changes ([DiPietro et al., 2012](#)).

A recent study done by [Kang et al. \(2015\)](#) looked at the perception of restaurant brand pages on Facebook. This study looked at the use of the internet and social networking sites and the role that they play in relationship marketing. The study showed that customers who participated in fan pages for restaurant brands were more likely to trust the brand and develop commitment to the brand. Marketers can utilize social networking to communicate about promotions, but also to try to get more people participating actively with a brand and thereby increase commitment and trust in the brand. More research in the area of social media marketing and social networking is needed to determine the most effective use of

social media marketing as this medium is becoming much more prevalent with restaurants and other hospitality organizations in recent years.

Marketing research in the foodservice area has been centered around effective use of the menu, relationship marketing and the use of online marketing as a source of competitive advantage for organizations. Research done on innovation in the foodservice industry is discussed next.

Innovation in foodservice

Innovation in the foodservice industry has been practiced throughout time as a way for restaurants to gain a competitive advantage by creating value for the customer. Often this innovation is reactive to other changes in the industry and is a short-term gain because other companies can readily copy the innovative advantage over time. In reviewing the literature from the past 10 years specifically on innovation in foodservice, there were several areas that had been researched: innovation in products, culinary, service and technology within the foodservice area (Harrington, 2004; Rodgers, 2007; Rodgers, 2008; Ottenbacher and Harrington, 2009).

One of the ways that a foodservice operation can have a competitive advantage is through innovation in their culinary expertise. Because these innovations can often be copied relatively easily, the organization must have a process or system through which the innovation is completed that will provide them with an advantage that cannot be copied as easily. Service innovations can also be tried and if adopted in a way that can be utilized as a part of an innovation part of the blueprint of the company, it can create a longer term advantage for the firm. Harrington (2004) created a culinary product development model that is a flow chart that can be implemented by an organization to create an innovation competitive advantage. The phases of the model are: culinary innovation formulation, culinary innovation implementation, evaluation and control and innovation introduction. These steps are constantly in process and are improving upon culinary innovations (Harrington, 2004).

In future research, Ottenbacher and Harrington (2009) reviewed the innovation process in a quick service restaurant environment and found that the process is a little more detailed and formal in comparison with earlier studies (Harrington, 2004). In quick service restaurant menu innovations, the teams that review and develop menu items follow a methodical, structured process to ensure that the innovation will be well received by the restaurants' customers. The risk is much higher in a larger chain restaurant for failure than in an independent restaurant where change can be done rather quickly.

Innovations related to technology have been researched by Rodgers (2007 and 2008) and also have been documented in the industry or trade press, as the role of self-service technology has increased over the past 10 years and as the demand from consumers rises in the restaurant industry. The public wants to be able to access menus, to pay their bills and to find directions to locations via their mobile devices. In a review of the innovations in foodservice technology by Rodgers (2007), the major innovations introduced over the past 20 years in foodservice are discussed in detail. These innovations (including improved equipment such as pressure fryers, steamers and convection ovens) have increased efficiencies in utility costs, food costs and labor costs (Rodgers, 2008). These innovations come from a multi-disciplinary approach to innovation including the fields of engineering, food science and restaurant management.

The key concepts that come from these research studies on innovation is that organizations need to be constantly looking to improve their processes in service and products due to the ease of duplication by others, thus diminishing the competitive

advantage of the innovation. Also, to obtain the most effective innovation, it will require a multi-disciplinary, proactive approach. Being reactive in foodservice is not innovative at all. Another area related to foodservice innovation is food safety and healthfulness of products. Research in the area of food safety and healthfulness of menu items has been an area of interest for a while, but the increased interest in it of late has occurred due to the increase in knowledge of customers regarding food safety and the concern for the public health crisis related to obesity. Common themes related to these areas of research are discussed in the following section.

Food safety and healthfulness

Food safety was a topic of interest in the foodservice industry as far back as 1978, as the industry realized the need for standards to maintain a safe environment within which to work and serve the public (Sandler, 1978). Over the past decade, consumers have become more aware of the potential dangers of the food supply chain as well as the need for more diligence on the part of restaurants to focus on food safety and security. The research done of late in food safety has related to ways to improve safety in the food supply chain as well as looking at consumer perceptions of food safety.

The ways to improve food safety issues in restaurants have been studied and findings have shown that interventions with training help to minimize the infractions caused by restaurant employees (York *et al.*, 2009). Past studies have shown that employees often perceived barriers to performing food safety practices in their restaurants. This study showed that if food safety training was used in conjunction with an intervention designed to eliminate perceived barriers by the employees, they were more apt to perform food safety procedures than if the employees just received food safety training or food safety barrier intervention. This shows that foodservice organizations need to be active in trying to use multiple forms of training and knowledge development for their employees to help get them to enact food safety behaviors. In a study by Lee *et al.* (2013), they assessed whether leadership style had anything to do with the attitude of the employees to perform food safety practices and found that transformational leadership did not help improve the attitudes to practice food safety, but it did improve the organizational commitment of the employees.

Studies have been done that look at the impact of the health inspector in the variability of health inspection and food safety scores (Lee *et al.*, 2010). It was determined that 34.15 per cent of the variance in health inspection scores is a result of the health inspectors themselves. This is an important factor because it could mean that additional training to help aid in consistency with the health inspectors could be done. Other studies have assessed the ability of health inspections to predict specific training needs of health inspectors (Lee *et al.*, 2012). It was determined from this study that when a certain violation is noted much less often with one inspector than with other inspectors, it is a good indication that there is a need for training on the violation criteria further. This study was done as a small pilot study, but more research could have been done about health inspectors and their role in the food safety issues. It is clear that proper training of health inspectors and employees is important for restaurants to be successful in understanding and abiding by food safety regulations.

Harris *et al.* (2014) looked at food safety violations and whether they were related to being a chain restaurant or a non-chain restaurant. The study found that where the restaurant was located within the state did matter, which could again indicate the influences of the health inspectors and/or the training of the inspectors in different locations, similar to the Lee *et al.* (2010) study. The Harris *et al.* (2014) study also found that independent restaurants were more likely to have critical food safety violations than chain restaurants which tend to have

strong control systems in place, indicating that training and systems to support food safety could be issues relating to higher incidence of food safety violations.

Consumer perceptions of food safety have been studied (Knight *et al.*, 2007). It was determined that customers did think about food safety when dining at a restaurant. The respondents believed that restaurants were committed to food safety, but they ranked restaurants lower in food safety than farmers, food processors and grocery stores. This study showed the importance of customers' perceptions of the food safety of a restaurant, as people can choose other places to dine at if they do not believe a restaurant is safe.

In addition to the increased awareness in food safety, food healthfulness and healthy food choices **in menus** have been studied over the past decade due to the impact of obesity in the USA and around the world. In a study by Lee and McCleary (2013), it was determined that older customers' perceived health status and health attitude were related to the decision to go to family restaurants with a higher perceived healthfulness and to the fact that those customers would also pay more for that healthy restaurant selection. Other studies have focused on including more healthy items on menus to help consumers have a choice about what to eat (Wansink and Love, 2014). This research found that if menus were designed with more nutritious, higher profitability items in prominent locations on the menu, more customers would be apt to choose them and therefore become healthier simply based on the design of the menu.

Research done by Davis *et al.* (2014) and Yang *et al.* (2015) followed up on the Labeling and Education Nutrition Act that was a part of the Affordable Care Act of 2011. This legislation mandated that restaurants with more than 20 units label their menus with calorie count information and the research looked at these nutritionally focused menus. The studies both found that people did change their ordering of fast food menu items when they were presented with calorie information via the menu board. They found that color-coded menus were more effective at getting customers to order healthier food items rather than the Food and Drug Administration (FDA) regulations related to calorie labeling. The color-coded menus put items together in groups with low-calorie items in one color, mid-calorie items in another color and a last color representing high-calorie items. By placing menu items with similar calorie counts or healthfulness together, customers were able to more easily determine which items they should be ordering.

Previous research also discussed using nutritional information on menus (Alexander *et al.*, 2010; Hwang and Lorenzen, 2008; Josiam and Foster, 2009). The Alexander *et al.* (2010) research looked at the perception of UK customers related to menu labeling and found that customers would appreciate having the calorie information. The Hwang and Lorenzen (2008) study found that customers believed that the more nutrition information that is presented on a menu, the more credible it is and that they would be willing to pay more for healthy items. The Josiam and Foster (2009) research furthered nutrition information research by finding that customers that were currently eating healthy food items at home were more likely to use nutrition information when dining out at restaurants. Overall, the research finds that having nutrition information available is a positive thing for customers, but it may not always be used effectively.

Some research has even assessed the **impact of menu nutrition labeling on customer attitudes and dining intentions** (Park *et al.*, 2013; Sun, 2013). These studies assessed customer perception of menu labeling related to healthfulness and found that providing nutrition information increased the selection of healthier food items. Individual differences impacted the selection as well, such as nutritional knowledge, health consciousness, body mass index and gender.

Perceptions of parents relating to the healthfulness and trustworthiness of restaurant claims of healthy foods were studied by [Lee et al. \(2015\)](#). The study done with parents' assessment of the credibility of nutrition information on children's menus found that if the menu used easy-to-understand symbols on children's menus and if they perceived the claims to be realistic and credible, they also perceived the restaurant to be more healthful and to have a positive perception of the restaurant. If the restaurant claims appeared to be less than credible, the restaurant was not viewed positively or as healthful.

Understanding choices of customers related to healthy food items is important from the perspective of knowing what to put on the menu in a restaurant, but also to understand the marketing that needs to be done to highlight those menu options. Incorporation of healthier menu items onto the menu in fast food restaurants is a fairly recent development, but has gained attention in the research over the past decade ([Dahm et al., 2010](#); [Kang et al., 2015](#); [Roseman and DiPietro, 2005](#); [DiPietro et al., 2004](#)). Most studies show that customers want healthy menu options, but they do not necessarily always translate those desires with actual purchases. The research also shows that if restaurants want to be successful in incorporating healthy items on the menu, they will have to do a better job of using creative marketing strategies and try to encourage people to eat these healthier items by touting the health benefits of the items ([Kang et al., 2015](#)).

More recent trends in the research in foodservice and restaurant management has been related to menu development and labeling due to the regulations of the US government as well as the increase in the number and types of unique foodservice operations. The following section will discuss the key themes discerned in the foodservice and restaurant research, the gaps found in the research that could be further explored and the implications for future research.

Discussion

Key themes

The key themes discussed in this paper are related to the research topics assessed over the past decade in the top-tier research journals in hospitality and tourism management related to the field of restaurant and foodservice management. These primary areas relate to the following: restaurant segments, operations, service quality, finance, marketing, innovation and food safety and healthfulness. See [Table I](#) for a summary of subtopics.

The primary research themes in the area of restaurant segments are that there have been additions to the segmentation of restaurants, and the research in these new types of restaurants, fast-casual and upscale-casual restaurants, have increased over the past decade. Research has been done to expand even further the segmentation of restaurants by including more of the attributes of restaurants to allow for more comprehensive research related to the variety of restaurants operating today.

The research in restaurant operations has focused primarily in the areas of success factors of restaurants, the increased use of technology in restaurant operations and the emphasis on customer social responsibility and sustainability in restaurant operations. The key research that has related to the success factors important to restaurant operations has found that strategic management and planning, along with management talent, helps an organization to be more successful. The myth that the majority of restaurants fail and that the only reason for this is lack of finances and lack of a good location has been dispelled, replaced by the knowledge that there are many factors that play into the success rate of a restaurant including the type of restaurant and management knowledge of the owners.

Other research in the area of restaurant operations has to do with technology use in restaurants and how this has changed the interaction between the customer and the

Broad topic	Topic/s	References
Restaurant segments	Restaurant segmentation, classification, and attributes	Barrows and Vieira (2013), Canziani <i>et al.</i> (2016), Ha and Jang (2013), Kivela (1997), Muller and Woods (1994)
	Casual restaurants and casual theme restaurants	DiPietro and Milman (2008), DiPietro and Partlow (2014), Dziadkowiec and Rood (2015), Madanoglu <i>et al.</i> (2008), Murphy <i>et al.</i> (2009), Murphy and Olsen (2009), Peng <i>et al.</i> (2015), Weiss <i>et al.</i> (2004)
	Fast-casual and quick-casual restaurants	Ogaard <i>et al.</i> (2005), Ottenbacher and Harrington (2009), Ryu and Han (2009), Ryu <i>et al.</i> (2010, 2008), Han and Ryu (2009), Ogaard <i>et al.</i> (2005)
	Cross segment comparisons Business and institutional dining Ethnic restaurants	Ha and Jang, 2012 Bright <i>et al.</i> (2009), McCool <i>et al.</i> (1994) Clemes <i>et al.</i> (2013), Ha and Jang (2010), Jang <i>et al.</i> (2012), Roseman <i>et al.</i> (2013)
Restaurant and foodservice operations	Restaurant success factors	Mamalis (2009), Mandabach <i>et al.</i> (2011), Parsa <i>et al.</i> (2005), Scanlon (1998), Stevens <i>et al.</i> (1995), Knutson <i>et al.</i> (1996)
	Technology in the restaurant industry	Huber <i>et al.</i> (2010), Kincaid and Baloglu (2005), Mozeik <i>et al.</i> (2009), Ruiz-Molina <i>et al.</i> (2014), Sigala (2003)
	Green practices and CSR in the restaurant industry	Chou <i>et al.</i> (2012), DiPietro <i>et al.</i> (2013), DiPietro and Gregory (2012), DiPietro <i>et al.</i> (2013), Dutta <i>et al.</i> (2008), Hu <i>et al.</i> (2010), Jeong <i>et al.</i> (2014), Xu (2014)
Service quality	Guest perceptions of service quality	Ford and Heaton (2001), Hurst (1970), Romm (1989), Susskind (2010)
	Service quality attributes and measurement	Parasuraman <i>et al.</i> (1988), Stevens <i>et al.</i> (1995)
	Service quality and guest satisfaction	Bujisic <i>et al.</i> (2014), Ha and Jang (2010), Mattila (2001), Namkung and Jang (2008), Perutkova and Parsa (2010), Ryu <i>et al.</i> (2012)
	Service quality in fast food restaurants	Wu and Mohi, 2015
	Servicescape and service environment	Kim and Moon, 2009; Ladhari <i>et al.</i> , 2008; Lin and Mattila, 2010; Ryu and Jang, 2008
	Employees' role in service quality	Susskind (2010)
	Waiting time	Bae and Kim (2014)
	Service failures and service recovery	Dutta <i>et al.</i> (2007), Guchait <i>et al.</i> (2015), Kim <i>et al.</i> (2010), Magnini and Ford (2004), Silber <i>et al.</i> (2009), Warden <i>et al.</i> (2008), Zeithaml and Bitner (2000)
	Service fairness	Ha and Jang (2009), Kwon and Jang (2012), Namkung <i>et al.</i> (2009)
	Service guarantees	Lee and Khan (2012)

(continued)

Table I.
Summary of key
foodservice research
themes

Broad topic	Topic/s	References
Finance	Accounting, ownership, financial risk, turnover and compensation	Barber <i>et al.</i> (2009), Dalbor and Upneja (2007), Demirer and Yuan (2013), Jang and Ryu (2006), Jang <i>et al.</i> (2011), Kim and Gu (2006), Madanoglu <i>et al.</i> (2008), Roh <i>et al.</i> (2013), Upneja <i>et al.</i> (2008)
	Factors related to performance	Assaf <i>et al.</i> , 2010; Mao and Gu, 2008; Parsa <i>et al.</i> , 2005
	Benchmarking	Hua and Lee (2014)
Marketing	Revenue management	Kimes (2008), Kimes <i>et al.</i> (1998), Kimes and Wirtz (2002)
	Economic impacts	Lee and Ha (2012), Zheng <i>et al.</i> (2012)
	Menu pricing and pricing strategies	Hu <i>et al.</i> (2006), Linassi <i>et al.</i> (2016), Naipaul and Parsa (2001), Yang and Chang (2011)
	Marketing via the menu	McCall and Lynn (2008)
	Promoting healthy menu items	Hur and Jang (2015), Jeong and Jang (2015)
	Coupons in the restaurant industry	Myung <i>et al.</i> (2006)
	Relationship marketing	Bahri-Ammari <i>et al.</i> (2016), Lin and Lin (2010), Robinson <i>et al.</i> (2005)
	Marketing impacts on consumer decisions	Harrington <i>et al.</i> (2013)
	Length of advertising effects	Park and Jang (2012)
	Internet marketing and social networking sites	Dev <i>et al.</i> (2010), DiPietro <i>et al.</i> (2012), Kang <i>et al.</i> (2015), Shock (2000)
Innovation in foodservice Food safety and healthfulness	Innovation in products and technology	Harrington (2004), Ottenbacher and Harrington (2009), Rodgers (2007, 2008)
	Food safety and improvement	Lee <i>et al.</i> (2013), Sandler (1978), York <i>et al.</i> (2009)
	Role of health inspectors and inspection reports/food safety violations	Lee <i>et al.</i> (2010, 2012), Harris <i>et al.</i> (2014)
	Consumer perceptions of food safety at restaurants	Knight <i>et al.</i> (2007)
	Food healthfulness and healthy food	Lee and McCleary (2013), Wansink and Love (2014)
	Impacts of nutritional labeling	Alexander <i>et al.</i> (2010), Dahm <i>et al.</i> (2010), Davis <i>et al.</i> (2014), DiPietro <i>et al.</i> (2004), Hwang and Lorenzen (2008), Josiam and Foster (2009), Kang <i>et al.</i> (2015), Lee <i>et al.</i> (2015), Park <i>et al.</i> (2013), Roseman and DiPietro (2005), Sun (2013), Yang <i>et al.</i> (2015)

Table I.

company, primarily for the better. The technology can help with controls and systems implementation, but also can be a key component of the marketing and communication strategy of the company. CSR and sustainability has been an area of research over the past decade, and with the new generation dining out more frequently, this topic of research interest will not go away soon.

In general, service research in the foodservice industry has focused on three primary areas: service quality attributes of foodservice used to create an experience (including food quality and overall service quality), service recovery and perceived service fairness and

guarantees. These research areas will continue to be a focus of the industry as restaurants try to determine what attributes are most important to customers moving forward. The topic of service recovery and perception of service fairness are key areas in research, as organizations need to know how to resolve complaints and issues that occur in the restaurant.

Overall research in the finance area of foodservice and restaurants have found that finances and firm performance are related, revenue management is a concept that can and should be used in the restaurant industry and menu pricing and pricing strategies are related to the success of foodservice operations. Due to the fact that most restaurants are commercial operations, the finance research is important to take into account and is an area that could be expanded.

Research on innovation in the foodservice industry has focused on the fact that innovation has to be a constant and ongoing process that organizations go through to stay competitive. The advantage that innovations can create in restaurant operations will not last long if other companies can adopt the innovations as well. In general, more research in the area of innovations as they occur would be helpful in moving the industry forward. Research tends to lag behind industry and practitioner innovation and academics needs to be more proactive in this area.

Marketing research in the foodservice area has been centered on the effective use of the menu, relationship marketing and the use of online marketing as a source of competitive advantage for organizations. These areas are critical to understanding how marketing can be most effective for bringing in new customers as well as retaining customers. More recent trends in the research in foodservice and restaurant management have been related to menu development and labeling due to the regulations of the US government as well as the increase in the number and types of unique foodservice operations. The next section will discuss the gaps in the research or potential areas that could be expanded related to research in the foodservice area.

Gaps in research

This section discusses the areas where gaps were determined to be found in the research that has been done over the past decade in foodservice and restaurant management. These gaps present opportunities for future scholars to add value to academics and practitioners in providing insights into the field. The critical insight of this paper is the helicopter view that is taken on the research and discerning the research topics that have not been fully explored.

The first way that research can be improved regarding the wide range of topics discussed in this review of literature is to look at a wider range of restaurant segments when creating research projects. By increasing the number and types of restaurant segments assessed, this makes the research more generalizable and helpful to the industry in terms of adding to the body of knowledge already out there. This could give practitioners insight into how a variety of restaurant segments react to specific research questions. There also should be more in-depth research related to ethnic restaurants and the unique characteristics that they have as this would also inform the research on operations. A final area related to restaurant segments is that there is a paucity of research on co-branding and the use of this as a restaurant strategy. Using research to study co-branding and the potential advantages of this strategy to bring multiple segments of restaurants together in one location could help analyze the various restaurant segments in a unique setting.

In relation to the research in operations, there is a lack of research on technology related to the technology adoption model with the various generations and their like or dislike of the adoption of technology in restaurants that involve the guest. In general, more research is needed related to self-service technology in foodservice operations. Also, more depth could

be used to research the impact of technology adoption in customer relationship management and the type of restaurants, such as fine dining and casual dining. Related to this topic, there is also a gap in the research related to guests' and employees' perceptions of the use of technology in the restaurant environment. There is a paucity of research related to how technology adds value to the guest experience and how it has changed the guest and employee experience. Future research in the area of technology will likely address the role of technology in service and examine the potentially changing service needs of the newer generations.

Another area in the foodservice area that should be an area of research in the future is alternative restaurant or foodservice operations, such things as mobile food trucks or pop up restaurants. The interesting thing about mobile food trucks is that the use of mobile food services was also researched back in a 1973 book titled *Foodservice Education in the USA*, as more foodservice operations were trying to find ways to be where the customer was, the use of food carts and kiosks were relevant even then. With the use of social media, chefs can open foodservice operations anywhere and anytime and notify customers when this happens. The use of mobile food carts and trucks and pop up restaurants can add to the entertainment value of the foodservice industry and more research needs to be done to determine customer perception and use of these types of operations. Another critical gap in the research is the lack of research studies done on current innovations in the field. For example, the increased use of self-service technologies in foodservice and the use of artisan or hand crafted foods and beverages, have been lacking in the research. The information that can be found on these more recent innovations can be found in industry journals and magazines, but key research is lacking. Restaurant researchers will have to work more proactively to look to these new innovative areas for research studies to help the foodservice industry.

In service quality research, the area of error management could be further explored to determine the best practices in resolution of customer problems. Despite the best efforts of restaurant organizations, problems are bound to happen and ensuring that these problems are resolved positively and quickly will help to ensure that customers return to the organization rather than defecting to other competitors. There is a gap in the research regarding the changing service needs of the younger generation and the role that service guarantees will play in the future.

In the area of finance, a gap in the research is related to the study of revenue management and how that can be used effectively for increasing revenue and ensuring that restaurants are competitive. This area of research is waiting for more investigation into it to ensure that restaurants are capitalizing on their peak and off peak hours. In regards to marketing research, there is a paucity of research in relation to how to market the menu and innovations related to products and features of the restaurant. There is also a gap in the area of marketing impacts on consumer decision-making in the foodservice industry. More research could also be done in the role of internet marketing and social networking sites.

More research could be done about health inspectors and their role in the food safety issues in restaurants. It is clear that proper training of health inspectors and employees is important for restaurants to be successful in understanding and abiding by food safety regulations. Overall, there are many areas in the foodservice segment of research that could be explored in more depth and details to help the overall industry. See [Table II](#) for research gaps framework.

General implications for future research

It can be seen through the gaps in the research noted above that there are still many areas of the foodservice and restaurant research that can be assessed in order to increase the

Broad topic	Gaps in the research
Restaurant segments	Multiple restaurant segments research Ethnic restaurant research Co-branding research
Restaurant and foodservice operations	Technology Adoption Model; self-service technology Technology in the restaurant industry – how does it relate to customer relationship management; adding value to the guest experience Alternative foodservice operations – food trucks, mobile carts, pop-up restaurants
Service quality	Millennial perceptions of service quality Error management and resolution
Finance	Revenue management in the foodservice industry
Marketing	Marketing via the menu Marketing the innovations in products and features of the restaurant Marketing impacts on consumer decisions and length of advertising effects Internet marketing and social networking sites
Innovation in foodservice	Proactive look at recent innovations in the foodservice industry – artisan or hand-crafted food and beverages
Food safety and healthfulness	Role of health inspectors and inspection reports/food safety violations

Table II.
Framework for gaps in
foodservice research

knowledge in the field of foodservice management. The research could help practitioners to develop more unique ways to obtain and retain guests, to improve operations and performance through the use of technology and increased efficiency, and to continue to look for ways to provide unique experiences for guests to increase return intention and improve positive word of mouth.

Future research needs to look for ways to help restaurant managers and owners to distinguish themselves from the masses. The implications of future studies need to focus on specifics and what can be done to provide the service needed to create the memorable experiences desired by many customers. By researchers adding to theoretical models and frameworks can create value to academicians and by presenting specific implications to practitioners, the foodservice and restaurant industry can improve and thrive in the future.

By improving the depth and quality of research done in foodservice and restaurant management to include some of the areas noted as gaps or denoted throughout the paper as lacking could aid restaurant practitioners with specific ideas and things to implement. The current paper reviews the research in the field and opens up thoughts for discussion and possible ideas for research. This will ultimately aid practitioners in the future as these new suggested research areas are developed.

Conclusions

In conclusion, it is evident that there has been a steady interest in the foodservice industry as it changes and evolves, but there are also areas where there are opportunities to add value to the industry through filling gaps with further research. Through the integration of technology and improved service techniques, along with more robust statistical analysis that can be done to provide interesting and informative data analysis, the industry is able to benefit from the continued questions and potential answers that research provides. The restaurant industry is going to continue to be a driving force in the hospitality industry and through attention to quality research will add value to the industry and academics alike.

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