The service digitalization in fine-dining restaurants: a cost-benefit perspective

Tan Vo-Thanh

Department of Marketing, CERIIM and CEREGE (EA 1722), Excelia, La Rochelle, France

Mustafeed Zaman

Department of Marketing, Métis Lab, EM Normandie Business School, Le Havre, France

Rajibul Hasan

Department of Marketing, School of Business, Maynooth University, Maynooth, Ireland

Shahriar Akter

School of Business, Faculty of Business and Law, University of Wollongong, Sydney, Australia, and

Thac Dang-Van

School of International Business, Xiamen University Tan Kah Kee College, Zhangzhou, China

Abstract

Purpose – This study aims to examine the perceived value of service digitalization in fine-dining restaurants in France. No study exists on this topic, and its aim is to address this research gap. To do so, a conceptual framework of the perceived benefits and costs of the service digitalization was developed. This study also provides actionable recommendations for fine-dining restaurant managers to create and manage an optimized fine-dining experience for their customers.

Design/methodology/approach – To obtain in-depth information, the authors opted for a qualitative research approach. The authors interviewed 24 fine-dining restaurant managers (listed in the Michelin Guide) and 29 customers of fine-dining restaurants using a video titled "The Restaurant of the Future."

Findings – The findings underline the perceived benefits and costs of service digitalization for both restaurant managers and their customers. This study highlights that fine-dining restaurants are highly experience-centric compared to other types of restaurants and recommends which services should be digitalized and which should not be to create and manage experiences throughout the customer journey.

Practical implications – This research provides restaurants with actionable recommendations in terms of service digitalization to enhance customers' fine-dining experiences.

Originality/value – This research fills a gap by proposing a conceptual framework to examine the digitalization of services in fine-dining restaurants.

Keywords Service digitalization, Fine-dining restaurants, Cost–benefit perceptions, Restaurant managers, Customers

Paper type Research paper

1. Introduction

Information and communication technologies (ICTs) have impacted the way companies are managed and compete (Dijkmans *et al.*, 2015; Elia *et al.*, 2021; Mariani *et al.*, 2019b), and facilitated consumers' access to information and purchasing options (Mariani *et al.*, 2019a, 2019b). In other words, the technological disruption has noticeably affected both the business and consumption spheres, influencing the traditional ways of manufacturing products and providing services on the one hand and how we consume products and services on the other hand (Bresciani *et al.*, 2021; Kirova and Vo-Thanh, 2019; Mariani *et al.*, 2014; Vo-Thanh *et al.*, 2021). Big data, internet connectivity, social networks and the Internet of Everything are transforming production and consumption (Bilgihan *et al.*, 2016; Bresciani *et al.*, 2018; Mariani and Borghi, 2019).

According to Dijkmans *et al.* (2015), tourism represents one of the sectors that is the most touched by ICTs and in which the adoption process has been more widespread. As the hospitality sector is traditionally human labor intensive compared to other sectors, thanks to ICTs, the cost savings from lower personnel expenses offer significant benefits for hospitality businesses (Law *et al.*, 2020). Similarly, food and beverage (F&B) businesses with a multitude of complex processes also use smart technologies to be more productive and to enhance customers' experiences (Bresciani, 2017; Elia *et al.*, 2021; Vrontis *et al.*, 2016). F&B customers are taking advantage of the availability and accessibility of smart technologies and social media in their consumption (Bresciani *et al.*, 2021; Vo-Thanh *et al.*, 2021; Vo-Thanh and Kirova, 2018).

Little is known about service digitalization in the restaurant context (Batat, 2021; Ciftci *et al.*, 2021; Leung and Wen, 2020; Park *et al.*, 2021). Numerous affordance-related concepts have been offered to examine the adoption and use of technology (Apostolidis *et al.*, 2021). Lee (2010) distinguished between core affordances and tangential affordances. Core affordances are created purposely by the provider of a technology, while tangential affordances may not be designed deliberately but rather perceived by users, leading to further differences between positive affordances (that are desired) and negative ones (that are undesired) (Apostolidis *et al.*, 2021). Hence, different perceptions of the value that the service digitalization can offer strongly affect the value co-creation process and customers' experiences.

To align with our research aim, we focused on the digitalization of the fine-dining restaurant experience. Indeed, in the restaurant sector, managers are increasingly interested in digital tools to enhance clients' dining experiences. Digital technologies potentially turn into a priority not only in offering digitized menus and food delivery but also in improving customers' overall restaurant experiences (Batat, 2021). While in the past, the fine-dining restaurant experience was often associated with French cuisine, the definition of fine-dining restaurants has, in recent years, changed due to the dominance of international cuisine (Harrington *et al.*, 2011).

According to Harr (2008), fine-dining restaurants can be described as having a set of tangible and intangible attributes, including:

- excellent food, which is prepared by a reputed chef with superior ingredients;
- outstanding taste and visual presentation of the food;
- a refined atmosphere and elegant décor;
- high-quality tableware and cutlery;
- staff and customers that are well dressed (formal and semi-formal outfits) and respect proper dining etiquette;

- the charging of premium prices and reservations being required in advance; and
- a faultless, precise and exquisite service. In this sense, fine-dining restaurants cover the experiential dimension and the symbolic one (Atwal *et al.*, 2019; Chen *et al.*, 2019; Dedeoğlu *et al.*, 2022; Mariani and Okumus, 2022).

Interaction between customers and front-line employees is also crucial for the fine-dining restaurant experience (Choi and Joung, 2017; Dutta *et al.*, 2014). Therefore, we argue that it is strategically important to study the digitalization of fine-dining restaurants because their poorly balanced digitalization could have an adverse effect on their essence – their symbolic and experiential dimensions.

From a literature standpoint, there are a limited number of studies on the adoption and use of service digitalization by businesses and customers in the fine-dining restaurant context (Park *et al.*, 2021). Digitalization, more specifically the use of self-service technology (SST) (e.g. self-order and pay tablets or cashless touch-screen kiosks), is a popular trend in fast-food chains (e.g. Burger King, KFC, McDonald's, Taco Bell, Wendy's) and casual-dining restaurants (e.g. Chili's and Applebee's) compared to fine-dining restaurants (Kim *et al.*, 2013; Park *et al.*, 2021). Previous studies on service digitalization have concentrated on quick-service or casual-dining restaurants (Ciftci *et al.*, 2021; Kim *et al.*, 2013), leaving a research gap on fine-dining restaurants. The results of previous studies may not be generalizable to other settings (Park *et al.*, 2021), which implies that how service digitalization influences customers' fine-dining restaurant experiences remains to be explored. The present study aims to fill this gap by studying the digitalization of fine-dining restaurants in France.

Our study focuses on fine-dining restaurants in France because they play a vital role in the French economy and culture. Since 2010, the "gastronomic meal of the French" has been inscribed on the Representative List of the Intangible Cultural Heritage of Humanity by UNESCO (UNESCO, 2021). According to the French Ministry for the Economy and Finance (2017), French gastronomy represented €87bn in annual turnover and 794,000 direct and indirect jobs in 2016. Fine-dining restaurants account for 15% of overall turnover, which is more than €13bn per year (Gira Conseil, 2019), making it important to understand how fine-dining restaurants can be digitalized without compromising their tangible and intangible attributes.

Wall and Berry (2007) point out that quick-service restaurant customers tend to have a different service quality perception compared to customers of other types of restaurants. Based on a conceptual framework developed from the concept of perceived value, which is widely employed in the context of technology acceptance (Oliveira *et al.*, 2016), this research examines how cost–benefit perceptions can influence service digitalization adoption and use by fine-dining restaurants and their customers and identifies which services should be prioritized for digitalization. The objectives of this study are as follows:

RO1. To investigate the various types of perceived benefits that fine-dining restaurateurs and their customers associate with service digitalization.

RO2. To investigate the various types of perceived costs that fine-dining restaurateurs and their customers associate with service digitalization.

RO3. To identify, in the context of fine-dining restaurants, which services should be prioritized for digitalization.

2. Conceptual background

2.1 Concept of perceived value

Potential adopters of digitalized services usually examine prices and assess service digitalization based on cost and benefit. Thus, they are not simple technology users but real consumers. In this sense, to examine individuals' (i.e. consumers') behaviors, it is common to opt for a value maximization perspective (Kim *et al.*, 2007). Kahneman and Tversky (1979) developed prospect theory to explain individuals' choices. According to this theory, the value function is established based on the perceived gain or loss in relation to a reference point. Individuals decide on the behavior that leads to the highest payoff. The cost–benefit perspective is exemplified in the value concept, which is broadly described as the trade-off between the benefits received and the costs (Zeithaml, 1988).

Previous studies on benefit and cost components have concentrated on perceived quality and price only (Chang and Wildt, 1994; Grewal *et al.*, 1998), which disregards the multidimensionality of decision-making and does not fully capture perceived benefits and costs (Holbrook, 2006; Jiang and Kim, 2015; Kim *et al.*, 2007; Vo-Thanh *et al.*, 2021). As a situational, comparative and personal preference characterizing a consumer's experience with any product or service, the value of a product or service can be perceived before, during and after its purchase (Holbrook, 2006; Jiang *et al.*, 2018; Sánchez *et al.*, 2006). Other researchers (Holbrook, 2006; Vo-Thanh *et al.*, 2021) also provide insights into the affective aspect when studying perceived value. According to Kim *et al.* (2007), value depicts an overall evaluation of a product or service that shapes individuals' choice behaviors. Thus, the present study considers a multidimensional conceptualization of perceived value to capture both its cognitive and affective aspects (Holbrook, 2006; Kim *et al.*, 2007; Sweeney and Soutar, 2001; Vo-Thanh *et al.*, 2021).

Several types of value covering both cognitive and affective aspects are observed in the literature: functional, social, emotional, epistemic (Jiang and Kim, 2015; Sweeney and Soutar, 2001) and conditional values (Sweeney and Soutar, 2001). As underlined by Sánchez *et al.* (2006) and Jiang and Kim (2015), there is a shortfall in most of the extant studies that focus on perceived value because these studies concentrated on what individuals benefit from rather than sacrifice for the exchange.

2.2 Perceived benefits

Scholars (Davis *et al.*, 1992; Kim *et al.*, 2007; Zaman *et al.*, 2021) often mobilize two main types of motivation to predict behavior: extrinsic and intrinsic. Extrinsic motivation is about the performance of an activity to realize valued outcomes (e.g. improved job performance or rewards), while "intrinsic motivation refers to the performance of an activity for no apparent reinforcement other than the process of performing the activity *per se*" (Davis *et al.*, 1992, p. 1112). In this sense, perceived usefulness can be seen as an example of extrinsic motivation, whereas enjoyment can be viewed as an example of intrinsic motivation (Davis *et al.*, 1992). Usefulness is described as an individual's expectation that using a product or service will result in improved job performance (Davis *et al.*, 1989, 1992). Usefulness, also regarded as an extrinsic and cognitive benefit, is positively associated with perceived value (Kim *et al.*, 2007). Enjoyment – an intrinsic and affective benefit – is the extent to which using a product or service is perceived to be enjoyable (Kim *et al.*, 2007). Previous studies suggest that enjoyment is a determinant of smartphone use (Kirova and Vo-Thanh, 2019), food mobile application adoption (Vo-Thanh *et al.*, 2021) and attitude toward mobile coupon service adoption (Ha and Im, 2014).

Recent studies have also underscored the relevance and crucial role of artificially intelligent (AI) devices in a service setting. AI devices can offer a competitive advantage for

firms, as they are seen as rare and imperfectly imitable resources (Mariani *et al.*, 2021). Prior research has pointed out that hedonic motivation is the main predictor of the adoption of AI devices (Fryer *et al.*, 2017) and performance expectancy (Gursoy *et al.*, 2019). In the same vein, Mariani and Borghi (2021) indicated that hotel guests who write online reviews that explicitly mention interactions with AI devices (i.e. service robots) are more inclined to give high ratings.

Given that individuals' perceptions of a product or service involve both cognitive and affective elements, Kim *et al.* (2007) proposed usefulness and enjoyment as the benefit components of perceived value.

2.3 Perceived costs

Customers not only pay money for an exchange but also incur various types of costs that are not money-related (Jiang and Kim, 2015; Sweeney and Soutar, 2001; Wang and Wang, 2010; Zeithaml, 1988). Monetary cost (price) is the most commonly used in studies on perceived value (Jiang and Kim, 2015; Wang and Wang, 2010). Perceived monetary cost has been found to have a significant negative effect on perceived value in most studies (Jiang and Kim, 2015; Wang and Wang, 2010). Nonmonetary costs or sacrifices refer to other kinds of costs, such as time and effort (Zeithaml, 1988), technological effort (physical and mental) (Wang and Wang, 2010) and explicit costs (inconvenience, lifestyle change, low performance) (Jiang and Kim, 2015). Wang and Wang (2010) demonstrated that technological effort has a negative effect on the perceived value of mobile hotel reservations. In the context of mobile services, several studies have identified technicality and price as the two main cost components of perceived value (Kim *et al.*, 2007; Wang and Wang, 2010).

In light of the above, to capture the cognitive, affective, intrinsic and extrinsic aspects of the perceived value of service digitalization, we developed a value-related conceptual model (Figure 1). This study seeks to explore what restaurateurs and their customers think they will receive (i.e. perceived benefits) and sacrifice (i.e. perceived costs) when acquiring and/or using digitalized services in fine-dining restaurants.

3. Methodology

3.1 Research design

To align with our research aim, and in line with previous studies (Lee *et al.*, 2022; Vo-Thanh *et al.*, 2021; Zaman *et al.*, 2021), we adopted an interpretivism research paradigm and a qualitative research approach to gain a deep understanding of the various types of perceived benefits and costs that restaurant managers and their customers associate with service digitalization in fine-dining restaurants. Understanding managers' and customers' reasoning behind service digitalization in a high-touch service industry requires research approaches that are able to stimulate humans' interpretations of their perceptions and behaviors. In this regard, an exploratory study is most appropriate to gain a deep understanding of the various types of perceived benefits and costs that managers and customers associate with service digitalization in fine-dining restaurants and to identify which services should be prioritized for digitalization.

3.2 Data collection

The data were collected through semi-structured interviews with fine-dining restaurant managers and their customers. We used the Michelin Guide (https://guide.michelin.com/fr/fr/selection/france/restaurants), which is internationally known for its restaurant rankings. In France, 3,179 restaurants are listed and ranked by the Michelin Guide, 515 of which are in Paris. In this study, we focused on fine-dining restaurants in Paris. To cope with the