"How mAI help you today?" Modelling the Drivers of AI Chatbots Effective Use in Family Businesses. The Moderating Role of Customer Affective Commitment.

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Abstract

In a digitally empowered business world, a growing number of family businesses are leveraging the use of chatbots in an attempt to improve customer experience. This research investigates the antecedents of chatbots successful use in small family businesses. Subsequently, the authors determine the effect of two distinctive sets of human-machine communication factors, namely functional and metaphysical, on customer experience. The latter is then is then assessed with respect to its effect on customer satisfaction. Whilst a form of intimate attachment is widely observed between customers and small businesses, affective commitment is prevalent in customers’ attitudes and could be conflicting with the distant and impersonal nature of chatbot services. Hence, the moderating role of customers’ affective commitment on the relationship between customer experience and customer satisfaction is also tested. Data were collected from 408 respondents and the results offer an explicit course of action for family businesses to effectively embed chatbot services in their communication with their customers. The authors provide practical and theoretical implications that stipulate the dimensions of chatbots effective use in the context of small sized family businesses.

Keywords*: AI chatbots, Family business, Customer Experience, Customer Satisfaction, Customer Affective Commitment, Anthropomorphism*

1.Introduction

Family firms play a very important role in the global economy. In the UK only, family businesses employ over 14 million people, which is over 50 per cent of all employees in the private sector. This contributes over £657 billion to UK GDP which is more than 43 per cent of the private sector's total GDP contribution (IFB Research Foundations, 2020). As firms are permitted to restart their operations after the last wave of the pandemic, and production levels head back towards more normal levels, family firms will continue to play a critical role in the economic recovery, as well as continue to make a very important contribution to the global economy in the future. Family firms are now acknowledged as the prime form of business enterprise in the world.

Nevertheless, management literature has been neglecting family firms for many years (e.g., Dyer & Dyer, 2009; Litz, 1997; Sharma et al., 2007), and only recently serious efforts have been made to define and capture their essence and dynamics (Hadjielias, Christofi, Vrontis & Khan, 2022; Glyptis et al., 2021; Sharma & Nordqvist, 2008; Klein, Astrachan, & Smyrnios, 2005; Chua, Chrisman, & Sharma, 1999; Heck & Trent, 1999; Westhead & Cowling, 1998; Handler, 1989). Essentially, this disparity comes as a result of the heterogeneity of organizations that fall under the heading of family businesses and the ambiguity revolving around their nature and arrangement; in recognition of the latter, there has been an ongoing debate to resolve definitional disparities in the past years (e.g. Astrachan & Shanker, 2003).

Whilst the need to gain a deeper understanding of the delineation of family businesses in different institutional contexts is always present, new themes are increasingly gaining scholarly attention in the field (e.g. Hadjielias, Christofi & Tarba, 2021; Thrassou, Vrontis & Bresciani, 2018; Craig & Salvato, 2012; Reuber & Fischer, 2011) given the massive use of digital technologies and the evolution digital transformation. As consumers progressively spend more time on digital platforms and the volume of e-commerce activities increases, family businesses are attempting to gain a competitive advantage (Moriuchi et al., 2021; Lude & Prügl, 2018; Huang & Rust, 2018; Bilgihan, Kandampully & Zhang, 2016) and meet customer requests (Araujo & Casais, 2020; Moriuchi et al., 2021; Kumar et al., 2020; Trivedi, 2019; Bilgihan, Kandampully & Zhang, 2016) through the use of new technologies. Effectively, they have been in the cusp of introducing digital tools to improve customer experience, aid business growth and offset competition, which is reportedly one of their biggest obstacles to success for small sized family businesses according to SBS (2018).

That said, Artificial Intelligence (AI) powered technologies, like chatbots, are increasingly applied in family businesses' e-commerce websites to accommodate the customer journey (Davenport et al., 2020; Kumar et al., 2020). Businesses employ AI technology to perform empathetic and intuitive tasks like humans (Huang & Rust, 2018) through the use of algorithms, software and technologies like machine learning, deep learning and natural language processing (Davenport et al., 2020). A conversational agent (CA) is powered with AI and uses human language to interact with customers (Danckwerts, Meißner & Krampe; 2019; Kumar et al., 2020). CAs can be distinguished according to their communication mode – namely, text-based and speech- based (Danckwerts, Meißner & Krampe; 2019; Araujo & Casais, 2020; Luo et al., 2019). Speech-based agent is, for example, Apple's Siri, while text-based ones are chat agents that respond to written text (Kumar et al., 2020; Danckwerts, Meißner & Krampe, 2019 Go & Sundar, 2019; Lee & Choi, 2017).

While AI technology implementation in business – customer communications is an eventuality that all businesses should prepare for, customers are nevertheless reported to also have unsatisfactory interactions with chatbots (Trivedi, 2019; Go & Sundar, 2019; Huang & Rust, 2018). Chatbots do not often meet the expectations of customers due to the misunderstanding of input (Sheehan, Jin & Gottlieb, 2020; Danckwerts, Meißner & Krampe, 2019) or due to perceived risk of using them (Trivedi, 2019) as they are not yet adequately sophisticated (Go & Sundar, 2019; Lee & Choi, 2017). More importantly, CAs often lack empathy and struggle to understand the emotions of customers (Huang & Rust, 2018; Luo et al., 2019; Danckwerts, Meißner & Krampe, 2019) and tend to communicate artificially due to their reliance on the programmed scripts (Go & Sundar, 2019). Conversely, some customers feel uncomfortable exchanging personal information with chatbots (Luo et al., 2019; Danckwerts, Meißner & Krampe, 2019) and this sense of distancing challenges the use of chatbots. This is further amplified by the allegedly strong personal relationships observed between small family businesses and their customers (Johnson, Herrmann & Huber, 2006; Rust, Zeithaml & Lemon, 2000; Price and Arnould, 1999). Reportedly, small businesses' distinctive customer experience lies in their human interaction with customers (Gilboa, Seger-Guttmann & Mimran, 2019). This unique personal relationship is conveyed through customer affective commitment, an attitude that reflects customers' attachment to a business and, thus, has pivotal role in relation to understanding chatbot successful implementation in a small family business context.

Subsequently, extrapolating the existing findings about the chatbots usefulness in the family

business context would be mostly based on intuition, as to the best of the authors knowledge no such study is conducted in relation to any family business setting. The contribution of this study, therefore, lies in the investigation of the effectiveness of chatbots used by family businesses. Identifying the antecedents of AI chatbot effective implementation in a family business context is of extreme importance given the sheer numbers of family businesses in the world economy and their contribution to GDP. It also becomes even more important given the increasing embedment of new technologies in customer service. But establishing these key factors is only the first part of the jigsaw. Understanding how these antecedents shape and influence customer experience at a more fine-grained level is the second part of the jigsaw, if we are able to offer potential solutions, which might ameliorate the family business customer journey. And this is where we present new knowledge and evidence, having initially established just how important specific drivers (namely functional and metaphysical) of chatbot effectiveness are in respect of customer experience in small family businesses. The moderating role of customer affective commitment is also considered given that our investigation focuses on small family businesses, where affective commitment is deemed as a critical driver of customer behaviour (Fullerton, 2003).

2.Theoretical conceptualization and hypotheses

2.1 Chatbots and Human Machine Communication

Chatbots, otherwise known as conversational agents or digital assistants, help consumers with product or service-related information in their path to make purchase decision (Willems et al., 2017). The literature presents chatbots as an opportunity for increased online engagement when they meet a certain criterion of features in interactions (Pantano & Pizzi, 2020). According to Evans (2019), more than 60% of respondents claim that AI will handle customer requests. Araújo and Casais's (2019) indicate that investment in chatbots is an important factor of differentiation as they will become a key competitive advantage that allows brands to create personalized experiences and offer tailored services and improved customer engagement (Euromonitor, 2020). In contrast, Prentice et al. (2020) suggest that chatbots are gaining popularity due to their operational efficiency and enhancement of customer experiences, however they claim this has little or no impact in comparison to employee efforts. Consequently, it is asserted that AI services should not be impetuously regarded as an essential component for a differentiation strategy.

On the same basis, insights by industry reports (Eurmonitor International, 2019) reveal that a gap exists within the relationship of AI, customers and businesses, as the absence of humans may not meet the customers' traditional expectations; therefore, a need of integrating human qualities with AI is highlighted. Wilson et al. (2017) posit that when chatbots display human-like characteristics and behaviors it is more likely for consumers to interact and relate with them. Nonetheless, recent studies address the limited knowledge available on the subject of augmenting consumer perceptions of trust and acceptance of these digital assistants (Wirtz et al., 2018). This is considered the main challenge of using chatbots as a communication method, the loss of the human touch and the distrust of algorithms making ethical decisions (Friedland, 2019) leading to customer pushback. In addition, risks and issues related to privacy violations, information bias, discrimination or manipulation are considered as challenges in chatbot adoption (Cheatham, Javanmardian and Samandari, 2019).

Lewis, Guzman and Schmidt (2019) suggest that traditional paradigms of communication theory do not supply a suitable theoretical underpinning for chatbot implementation. As communication theory is based on human-to-human interactions, it has failed to evolve and integrate technology (Gunkel, 2012). Additionally, communication theory holds an anthropocentric meaning of communication that is a reflection of a larger cultural conceptualization of communication, which is limited to humans (Peters, 1999). Human Machine Communication (HMC) was developed to tackle this issue and progress the study of AI by theorizing technology in the context of communication with humans (Lewis, Guzman and Schmidt, 2019). Guzman (2018) defines HMC as creating meaning between humans and machines, whereas Spence (2019) considers it as a modification and advancement of the theory involved in people's interactions with chatbots and technology. With AI technologies now designed to function as communicators (Rogers, 1997), certain dimensions of HMC, namely functional and metaphysical can be adapted to assess the effective use of AI powered technologies in customer-business communication. Functional elements refer to how people make sense of AI devices and technologies as communicators while metaphysical elements refer to the blurring of ontological boundaries around what constitutes as human, machine and communicator (Gunkel, 2012).

2.2 Customer Experience

Contemporary marketing activities aim to create and enrich the customer journey, also known and theorised as customer experience with the firm or the brand (Lemon and Verhoef, 2016).

Experiences are seen as the cumulative effect of business – customer interaction in various touchpoints (Lee et al., 2018; Shankar, 2014), highlighting the holistic nature of customer experience (Bolton et al., 2018; Schmitt, Brakus & Zarantonello, 2015; Meyer & Schwager, 2007). The literature provides numerous definitions of customer experience (Richardson, 2010; Lemon & Verhoef, 2016). Customer experience is recently conceptualised as 'the internal and subjective response that customers have to any direct or indirect contact with the company (Meyer & Schwager, 2007, p18) while Jain, Aagja, and Bagdare (2017) posit that it is the sum of feelings, perceptions and attitudes shaped during a cohesive succession of contacts with people, objects, processes and environment. It is also suggested that the concept of customer experience refers to a multidimensional (i.e. emotional, cognitive, sensorial, relational and behavioural) customer response to a business offering or communication (Jaakkola, Helkkula, and Aarikka-Stenroos, 2015; Schmitt, 1999). For instance, the use of emoticons in a chatbot service impacts the emotional dimension of customer experience (Bleier, Harmeling & Palmatier, 2019; Brakus, Schmitt & Zarantonello, 2009; Lemon & Verhoef, 2016). The acknowledgement of customers emotions is actually a fundamental antecedent of customer experience (McLean, Al-Nabhani & Wilson, 2018; Edvardsson, 2005). As such, in its current conseptualisation, customer experience is expected to embody the subjective response of customers towards a direct or indirect contact (e.g. chatbot service) with a company (Homburg, Jozić & Kuehnl, 2017).

Customer experience significance for companies and marketers is further asserted by its use to determine the company performance and define the strategic marketing objectives (Bilgihan, Kandampully & Zhang, 2016; Klaus & Maklan, 2013; Rose, Hair & Clark, 2011). Previous studies have linked positive customer experience to different outcomes pertaining to e.g. customer satisfaction, customer loyalty, re-purchase intention (Shobeiri, Mazaheri & Laroche, 2018; McLean, Al-Nabhani & Wilson, 2018; Verhoef et al., 2009). These outcomes are achieved with the use of effective marketing strategies (e.g. the use of new technologies in marketing communication) and are leveraged more effectively through the creation of positive customer experience (Bilgihan, Kandampully & Zhang, 2016; McLean, Al-Nabhani & Wilson, 2018).

Given the formerly claimed perception of family businesses, as better in service but worse in price vs value, there is inadequate evidence about family businesses performance in terms of customer experience (Orth & Green, 2009). With big corporations already demonstrating

proficiency in expanding experience optimization across channels, it is also imperative for businesses that lag behind (e.g. SME family businesses) to delve into the antecedents of customer experience. As the twin pressures of consumer expectations and competition continue to accelerate, and while family businesses slowly move away from (Schmitt, 1999) traditional marketing, it is critical to exploit the use of innovative customer services (e.g. chatbots) and provide exceptional experiences to keep their customers satisfied (Rose, Hair & Clark, 2011).

2.3 Customer Satisfaction

Customer satisfaction has been in the centre of academics' attention for many decades (e.g. Oliver, 1981; Li et al., 2020). Researchers have assessed customer satisfaction in various contexts and in relation to several critical factors (e.g. Szymanski and Henard, 2001; De Wulf et al., 2001; Garbarino and Johnson, 1999). While there is a wide stream of research across multiple disciplines within the extant literature, there is no consensus on the definition of customer satisfaction. Chiou and Droge (2006) posit that satisfaction is reached when customers purchase choices meet or exceed their positive expectations. This is further rationalized by the expectation confirmation theory (Oliver, 1977), where satisfaction is seen as the active process of expectation formation, technology use and confirmation towards a satisfied judgment (Brill et al., 2019; Morgeson, 2013). Parasuraman et al. (1995) explain that satisfaction is achieved when consumers continue to use a specific service rather than choosing an alternative; in this respect service quality, regardless of whether it refers to the overall service (e.g. the one the customer paid for) or part of it (e.g. customer service from a chatbot), is considered as a precursor of customer satisfaction (Meuter et al., 2000; Shi et al., 2014).

Scholars have associated satisfaction with AI related functions of a service (Gursoy et al., 2019; Araújo and Casais, 2019; Prentice et al., 2019). Prentice et al. (2020) suggest that the use of chatbots and other AI-powered applications is offered to enhance customer experience (Van Belleghem, 2017) and is thus, significantly related to customer satisfaction. Core elements of technology acceptance theories (e.g. TAM, Davis, 1985), such as perceived usefulness, have also been associated with satisfaction (Scherer et al., 2019; Marangunić and Granić, 2014); still the power of these models to explain customers behaviour towards AI-powered services is allegedly curtailed owing to their effectiveness to assess only non-intelligent technologies (Lu et al., 2019). Customer satisfaction is fundamentally important in a family business context where business-customer relationships are presumably based on a genuine connection of mutual understanding, trust and rapport (Anderson and Sullivan, 1993; Cooper et al., 2005). In order to instil and renew

these relationships, family businesses endeavour to offer customer enhanced customer journey through technological advancements, like AI chatbots, and increased customer satisfaction through improved customer experience. Similar to prior investigation (e.g. Oliva et al., 1992; Mittal et al., 1998) satisfaction in this study is theorised as the evaluation of the total of customer – family business relationship (Anderson and Narus, 1990).

2.4 Functional Factors of Chatbots Use and Customer Experience

According to Human Machine Communication (HMC) theory (Guzman and Lewis, 2020), the users' perception of AI chatbots as communicators is immediately related to the functional dimension of these machines and to the pertaining factors. This dimension refers to the practicality of the chatbot use, for example to its usefulness and communication skills. These characteristics are supposedly prominent in altering users' perceptions of AI conversation agents (Sundar, 2008; Crolic et al, 2022). Accordingly, perceived usefulness and perceived ease of use are presented as two of the functional elements that can be considered as experience factors in the context of service robots (Wirtz et al., 2018). Both derive from the Technology Acceptance Model (TAM) and are therefore primarily expected to serve as predictors of technology acceptance (McLean, Al-Nabhani & Wilson, 2018; McLean & Osei-Frimpong, 2017; Rose, Hair & Clark, 2011; Bilgihan, Kandampully & Zhang, 2016). Still, perceived ease of use is alleged to be somewhat irrelevant to chatbots as the latter do not require users to learn how to operate them; they are designed to resemble and replace employees, therefore ease of use would not meaningfully relate to experience either.

On the contrary, customers are normally shaping their experience on the basis of AI chatbot communication usefulness. In that case, the user-machine communication is determined by the influence of role theory, which suggests that both actors should behave in harmony with socially defined roles in order for role congruency to emerge (Solomun et al., 1985). Roles, here, are defined as collections of social, functional and cultural norms that dictate how interacting parties should act in certain situations (Giebelhaussen, 2014). Therefore, if the chatbot presents itself in a socially acceptable manner, the interacting user will comply with the same behaviour. Functional elements could otherwise be a barrier to the customer – bot communication, that is if not exhibited at a standard expected by consumers (Wirtz et al., 2018). Conversely, Chung et al. (2020) suggest that problem solving, customization and enjoyment are key functional elements that can ameliorate customer communication experience and satisfaction. Building on the aforementioned

theoretical standpoint, this study examines four functional elements of chatbots use, namely perceived usefulness, problem solving, customization and perceived enjoyment, which will be discussed further in relation to customer experience.

2.4.1 Perceived usefulness and Customer Experience

The usefulness of information systems refers to the way they assist customers to increase efficiency, productivity and the overall performance (Davis, 1989). Perceived usefulness plays a vital role in accepting new technology (Kasilingam, 2020). Equally, previous studies present the significant impact of perceived usefulness on the use and behavioural intention towards specific forms of technology (Wu & Wang, 2005; Khalifa & Shen, 2008; Zhang, Zhu & Liu, 2012). According to Rose et al. (2012) customer experience is influenced by the usefulness of technology. Many researchers have subsequently examined the impact of usefulness on customer satisfaction and customer experience (Trivedi, 2019; McLean & Osei- Frimpong, 2017; Martin, Mortimer & Andrews, 2015; Rose et al., 2012; McLean, Al- Nabhani & Wilson, 2018; Bilgihan, Kandampully & Zhang, 2016). Consumers are more likely to adapt and use technology that they perceive as useful (Kasilingam, 2020). Previous research also shows that users' predefined expectations about technology usefulness are prerequisites of their positive experience (Jan & Contreras, 2011; King & He, 2006; Kasilingam, 2020). Therefore, the requirement of the perceived usefulness needs to be fulfilled in order to create positive experiences (Hackbarth, Grover & Yi, 2003). The following hypothesis can, thus, be drawn to examine the relationship between perceived usefulness and customer experience:

H_1: Perceived usefulness positively impacts customer experience with family business chatbots

2.4.2 Perceived Enjoyment and Customer Experience

Perceived enjoyment refers to the level of entertainment and fun in an exchange of effective help with peers. Conversely, it effects the intrinsic motivation for systematic cognitive processing and, thus, the attitude towards the technology's usefulness (Lee & Choi, 2017; Sun and Zhang, 2008; Venkatesh et al., 2002) and functionality (Venkatesh, 2000; Rese et al., 2017; Bilgihan, Kandampully & Zhang, 2016). It indicates the excitement of customers, and it functions as an intrinsic value of e-commerce behaviour (Salehi, Salimi & Haque, 2013; Bilgihan, Kandampully & Zhang, 2016). Several technology-acceptance studies have investigated perceived enjoyment (e.g Venkatesh, Thong & Xu, 2012); reportedly it is a significant factor leading to positive customer experience (Hsiao, Chang & Tang, 2016;

McLean, Al-Nabhani & Wilson, 2018; Bilgihan, Kandampully & Zhang, 2016). However, little to no research is conducted in the context of chatbots use. Chatbots with more sophisticated social skills tend to demonstrate enriched entertainment elements, increase perceived enjoyment and eventually enhance the customer experience (Lee & Choi, 2017). In fact, previous research suggests that customers will not report a positive experience without enjoying their activity (Hoffman & Novak, 2009; Hsiao, Chang & Tang, 2016). The more a customer enjoys communicating through chatbots, the more likely this individual will have a seamless experience and continue using this service ((Muntinga et al., 2011). Eventually, enjoyment impacts the customer experience positively (Haas & Kenning, 2014; Kasilingam, 2020). Thus, the following hypothesis can be drawn:

H_2: Perceived enjoyment positively impacts customer experience with family business chatbots.

2.4.3 Problem Solving and Customer Experience

Problem solving entails instant and direct responses to issues that the customer brings forward; essentially the way this is executed forms attitudes and perceptions about the service involved (Kim et al., 2016). Subsequently, customers whose expectations are met tend to report a positive experience while those with unresolved issues feel frustrated and alienated. AI powered devices can offer advanced skills and are used in customer service to conform with this conception. It is anticipated that chatbots will effectively resolve consumer issues, as they can successfully make decisions when dealing with complex tasks (Gray, Reardon & Kotler, 2017). Effective problem solving is seen one of the principal success factors for family businesses (Hoover & Hoover, 1999); in retrospect they create positive customer experience through relationship marketing practices, customer care and day-to-day problem solving. Using chatbots as a means of communication is expected to amplify problem solving effectiveness and, hence, contribute to a progressive boost to customer experience. Although effective problem solving is a concept notionally close to perceived usefulness, we consider its separate inclusion in our conceptual framework important, as decision making is particularly crucial for customer interactions and AI devices' contribution to that end goes beyond the general firm productivity and effectiveness improvement. Thus, we hypothesise:

H_3: Effective problem-solving skills positively impacts customer experience with family business chatbots.

2.4.4 Customization and Customer Experience

Customization refers to the process of personalizing and tailoring offerings to satisfy individual needs (Wang and Li, 2012). This could be achieved through the use of big data, AI technologies and customer relationship management strategies that reportedly promote personalization and customization of customer services (Anshari et al., 2019). Exceptional conversation agent - customer interaction derives from customer need for customization (Locker, 1995). Unlike the established technology-based customer service already illustrating large enterprises practices, small family businesses customization derives mostly from employee-customer interaction. Chatbots are able to meet that standard as they can offer personalized messages and assistance through direct chat and meet the customers' individual differences through co-creation, e.g. when customers are able to self-create their chatbot (Wald et al., 2021). Akin to previous studies (Teng, 2010; Mochon et al., 2012), small family business customers are expected to be more eager to engage with a chatbot they self-create, thus having the opportunity for increased level of customer experience (Chakrabarty, Widing & Brown, 2014; Chaung et al., 2020). Hence, we hypothesize:

H_4: Customization positively impacts customer experience with family business chatbots.

2.5 Metaphysical Factors of Chatbots Use and Customer Experience

Guzman and Lewis (2019) describe the metaphysical aspects of communicating through AI devices as the dissolution of ontological boundaries between individuals and technology. These barriers refer to certain characteristics of human substance, function and behaviour (Riskin, 2007). The metaphysical dimension, therefore, embraces the idea of establishing particular humanistic attributes to chatbots that would allow users to relate to them flawlessly and experience a seamless customer journey (Papacharissi, 2019). Progressively, the social roles between customers and chatbots are clearly defined and explained and customer expectations are more accurately formed; in other words, customers are able to mentally prepare on how they should communicate with chatbots (Suchman, 2009). This is driven by verbal and non-verbal attributes such as social presence demonstrated by the device technology, humanlike responses, emotions and anthropomorphic qualities. These elements inform users on how to conceptualize the chatbot and how to act and communicate with it, leading to customer improved customer experience and acceptance (Guzman, 2020). Eventually, as chatbots are designed to take on a role previously assigned to a human, this blurs the border between humans and machines (Weil, 2017).

2.5.1 Social Presence and Customer Experience

Many scientists have worked on social presence theory and elaborated the concept of social presence (Lu, Fan & Zhou, 2016; Short, Williams & Christie, 1976). Social presence is defined as 'the degree of salience of the other person in the interaction' (Short, Williams & Christie, 1976, p65). It refers to the connection, perception and feelings of customers towards another intellectual identity like chatbots (De Cicco, e Silva & Alparone, 2020 Kang & Lee, 2018; Hassanein & Head, 2007)) and is expressed through visual humanlike cues (e.g. figures) that may increase the feeling of salience (Go & Sundar, 2019). Social presence creates a psychological connection between customer and technology that reportedly leads to positive experience (Lu, Fan & Zhou, 2016; Ogara, Koh & Prybutok, 2014). On this basis, previous research has tested the effect of social presence on perceived human warmth in the digital communication environment (Go & Sundar, 2019; Araujo, 2018; Chen, Olfman & Harris, 2005). Social presence theory has been intensively investigated in the context of information systems and is found to have a critical role in shaping customer experience (Ogara, Koh & Prybutok, 2014; Short, Williams & Christie, 1976; Ye et al., 2019), particularly e-service experience (Kang & Lee, 2018). When the attribute of social presence is embedded in technology it can predict the experience of the customer with a tech interface (Ye et al., 2019). Thus, the following hypothesis can be drawn:

H_5: Social presence positively impacts customer experience with family business chatbots

2.5.2 Emotions and Customer Experience

Positive emotions are seen to stipulate fruitful experiences within social interactions: familiarity, empathy and warmth are achieved through smooth, accurate and complete dialect (Emmers-Sommer, 2004). By expressing emotions in a human-machine interaction, chatbots are attaining social roles therefore users form corresponding expectations and attitudes (Nass and Moon, 2000). Sutoyo et al. (2019) explain that expression of emotions is key for chatbot believability. It is also suggested that chatbots exhibiting humanoid emotions of empathy and compassion lead to more trust (Wirtz et al., 2018; Van Doorn et al., 2017). Emotions may also be displayed through 'Emoji's', which are defined as small digital images that convey emotions and ideas. Several studies (e.g. Beattie, Edwards & Edwards, 2020) posit that the use of Emojis produced feelings of intimacy and uplifted mood (Ganster, Eimler, Krämer, 2012; Shevat, 2017) resulting in greater customer experience. Emotions expression enhances perceptions of attentiveness, emotional

expressions and competence in chatbot users. Gursoy et al. (2019) acknowledge the need for a comprehensive model that encompasses the emotional and social presence of chatbots in interactions elements that are neglected in TAM. According to the of AI Device Use Acceptance (AIDUA) theoretical model (Van Doorn et al., 2016), individual's response to a stimulus is decided by the emotions generated by them in multi-facetted cognitive evaluation of the stimulus (Lazarus, 1991). Thus, based on these studies, a consumer's acceptance of chatbot communication is highly related to the emotions generated during the interaction. Therefore, the following hypothesis is formed:

H_6: Emotions positively impact customer experience with family business chatbots.

2.5.3 Anthropomorphism and Customer Experience

Anthropomorphism is the process of assigning human characteristics and traits to computer technology (Araujo, 2018; Sheehan, Jin & Gottlieb, 2020). Alternatively, anthropomorphism refers to 'the human tendency to attribute human-like characteristics such as intentions, emotions or motivations to non- human agents' (Seeger & Heinzl, 2018, p132).); it is, therefore, considered one of the key elements in establishing humanlike interactions between chatbots and customers (Seeger & Heinzl, 2018; Sheehan, Jin & Gottlieb, 2020). Human-like characteristics (e.g. the use of language idioms) help the consumers to establish a relationship with the computer agent (Touré-Tillery & McGill, 2015; Kiesler et al., 2008; Nass, 2004, Crolic et al, 2022). When customers anthropomorphise they serve the need to increase their control of an unpredictable computer agent (Seeger & Heinzl, 2018; Waytz et al., 2010; Epley et al., 2008). Go and Sundar (2019) reveal that visual anthropomorphic representation of a human chatbot increases levels of homophily. This is a result of increased social presence through an established identity as this suggests the existence of another person during the interaction. Luo et al. (2019) revealed that customers are alienated if they realise the non-human nature of chatbots; 'machine vs. human' heuristics are triggered when consumers are aware that the conversational partner is not a human.

What's more human characteristics, such as names, are likely to fuel "humanness" heuristics (Sundar, 2008), and shape social perceptions, which allows users to treat chatbots as social actors (Nass and Moon, 2000). If the agent is perceived as a chatbot, users will judge its performance based on their pre-conceptions of machines rather than their actual performance (Koh & Sundar, 2010; Sundar, 2008). This can be attributed to category-based perceptions

composed by social labels, which humans carry out to minimize cognitive effort when making judgments of others (Ashforth & Humphrey, 1997).Furthermore, a human-like conversation with a chatbot increases the satisfaction of customers and helps to form a positive customer experience (Lee & Choi, 2017). When customers perceive chatbots as human-like, they are more likely to establish an emotional connection, and therefore, enhance their overall experience (Danckwerts, Meißner & Krampe, 2019; Sheehan, Jin & Gottlieb, 2020). Hence, the following hypothesis can be drawn to examine the relationship between perceived humanness and customer experience:

H_7: Anthropomorphism positively impacts customer experience with family business chatbots.

2.6 Customer Experience, Customer Satisfaction and the moderating role of Customer Affective Commitment

Customer experience is, by definition, able to predict customer satisfaction (Oraedu, 2017; Zarantenello and Schmitt, 2000), as the latter refers to the evaluation of both partial and full experience with the offering provided by a business (Ugwuanyi et al, 2021). Ultimately, this suggests an enduring positive relation between the two constructs (Garg et al., 2014; Overby and Lee, 2006) as already discussed above. In a similar vein, a good experience with an AI powered chatbot service enhances the overall business offering and adds value to the relationship. Hence, conversation assistants are expected to optimize customers' experience, which, in turn, is positively related to enhanced levels of customer satisfaction (Ying et al., 2020); customers with advanced experience are expected to be more satisfied. Thus, we propose the hypothesis below:

H_8: Customer experience with family business chatbots positively impacts customer satisfaction

Despite the emergence of new technologies in customer service, family business staff members continue to have a pivotal, albeit somewhat diluted role (Young et al., 2009). They are the family business face in the customers' eyes and preserve a relationship of mutual commitment with customer. Customers' affective commitment is particularly resilient in small family businesses and this draws extensively on the unique, strong relationships built between customers and businesses. This is reflected by the strength of the customer's identification and involvement with that business (Porter et al. 1974) and comprises the basis of affective

commitment. (Bansal, Irving & Taylor 2004; Fullerton 2003). Affective commitment which is widely researched in the literature is described the "psychological attachment" to a business (Gundlach, Achrol &Mentzer, 1995), entails the customer motivation to remain in a relationship with that business. Effectively, this is different to loyalty in that affective commitment is a positive bonding and not a behavioural intention (Wetzels, de Ruyter, and Lemmink, 2000). In that sense, it should be mostly seen as a predictor of customer behaviour rather than the outcome or the actual behaviour itself. That said, the distinctive role of affective commitment in the family business context is expected to amplify the positive effect of customer experience on customer satisfaction. Overall, when customers are affectively committed to businesses (like in small family businesses), they are inclined to be more positive when experiencing a service (Fullerton, 2005) and consequently more satisfied. Thus:

H_9: Customer affective commitment has a moderating effect on the relationship between customer experience with family business chatbots and customer satisfaction.

3. Methodology

The target market for this study was the UK market, where family-owned SMEs continue to drive innovation (Covin et al., 2016). In plain numbers, more than 20 per cent of them have directed their efforts towards drastically enhancing their business and communication processes and services. According to Repgraph (2020), 15.1 per cent of family SMEs have invested in R&D over the last three years. The overall dynamics of family businesses are also outstanding, as approximately 88 per cent of all businesses in the UK, and a total of more than 5 million in actual numbers are family-owned businesses that operate in the UK today (IFB Research Foundations, 2020). Initially, a series of discussions with market experts, namely small family business owners and customers, helped us get a clear picture of the specifics of the constructs in the family business context.

To test the validity of our developed research hypotheses, we followed a positivistic approach and carried out a primary quantitative study (Parasuraman et al, 2006). Specifically, we carried out a field study with the use of structured questionnaire. It was considered essential for participants to have recent, real-life experiences with chatbots, so all of the participants included in the sample had previously used chatbots. To secure for this, we liaised with small family business managers that use chatbots in their customer service. Specifically, using the UK government's database

"Companies House" we identified 600 family firms that can be classified as small since they "*annual turnover must be not more than £6.5 million, the balance sheet total must be not more than £3.26 million and the average number of employees must be not more than 50*" (Companies House, 2021). Sequentially, we chose 80 of these firms that after an online check we did, they were identified as companies that use chatbots to communicate with their customers. We then conducted a manager from each of the 80 firms by email, explaining the scope of our study and asking them for access to customers who use their chatbots. Out of 80 managers, 45 agreed to help us with our study. subsequently, we used the chatbot communication service to recruit participants during their interaction with a chatbot. Specifically, at the end of the communication, the chatbot offered the option to participate to the study. Chatbot users had to simply follow a link to the questionnaire once they declared their interest to take part in the research. In order to achieve consistency in the service delivered by various family businesses' chatbots, we used only chatbots that offered information via text pertaining to customer requests and queries about the business or the business services. In cases where the chatbots could not give a convincing answer the chat was ended, and the users were offered the study link before they were directed to talk to a human representative who would follow up the discussion. The participants' ages ranged from 25–65 years (mean = 34.4; SD = 3.7). 216 participants identified as female and 192 as male.

Problem Solving and *Customization* were measured with scales adapted from Chung et al. (2020) describing the interaction with the chatbot in terms of problems solving customization skills respectively. *Perceived Enjoyment* and *Emotions* scale items derived from Lu, Cai and Gursoy (2019). Similarly, the measurement for *Anthropomorphism* was adapted from scales validated in previous studies (Mowday, Steers, and Porter 1979; White and Schneider 2000). *Perceived Usefulness* was adapted from Davis (1989). *Social Presence* measurement was adapted from Gefen and Straub (2003) and measured how the participants perceived social presence displayed by the chatbot in their interaction. In line with the existing literature (Harrison-Walker, 2001; White & Schneider, 2000) *Affective Commitment* was assessed by adapting the scale that measured the psychological attachment (sense of belonging) with the family business. Likewise, *Customer Experience* scale was adapted from Trivedi (20019). *Customer Satisfaction* scale derived from Chung et al. (2020) measuring overall customer satisfaction. All measurement scales were assessed based on 7-point Likert-type scale items and ranged from 1= "strongly disagree" to 7= "strongly agree". Emotions were assessed on a 7-point bi-polar scale (e.g. bored-relaxed).

Due to the fact that all data come from a single source, we consider the possibility of bias due to common method variance relatively high (Podsakoff et al. 2003). For that reason, we tested our data for common method bias using Harman's one-factor test (Harman, 1976). The results indicated that the study's item cannot be grouped into a single factor ($p < 0.001$), proving us with evidence to assume that common method bias is not a significant factor in our study.

4. Data Analysis

4.1 Scales' validity and reliability

In order to test the scales' validity and reliability, we carried out confirmatory factor analysis (CFA) and then calculated each scale's Average Variance Extracted (AVE), Composite Reliability (CR) coefficient and Cronbach a coefficient. As shown in Table 1, all measurements were found valid and reliable (Nunnally 1978; Fornell & Larcker 1981). Subsequently, the data were aggregated into a single measurement for each scale by calculating the arithmetic mean. The aggregated measures were tested for normality, by calculating their skewness and kurtosis indices and they were found to follow the normal distribution by approximation. The skewness and kurtosis indices, along with the aggregated scales' descriptive statistics are depicted in Table 1.

-Place Table 1 around here-

4.2 Hypotheses testing

To test the validity of the study's hypothesised conceptual framework (Figure 1), we employed structural equation modelling (SEM) using EQS 6.2. We incorporated the measurement component and the path component in a single hypothesized model. As indicated by the results presented in Table 2, the hypothesized model has a relatively good fit with the data (X^2=6191.68, df=397, CFI=0.927, TLI=0.920, RMSEA=0.089). Furthermore, most paths' coefficients were found significant as hypothesized. Specifically, *Customer Experience* was found to be positively and significantly influenced by *Perceived Usefulness*, *Problem Solving*, *Customization*, *Anthropomorphism*, *Emotions* and *Social Presence* ($R^2 = 0.869$). Hypotheses H_1, H_3, H_4, H_5, H_6 and H_7 are therefore accepted. On the contrary, there is are not enough evidence to accept hypothesis H_2, as the relationship between *Perceived Enjoyment* and *Customer Experience* was not found significant. Finally, *Customer Experience* was found to influence *Customer Satisfaction* positively and significantly ($R^2 = 0.742$), allowing as therefore to accept H_8.

-Place Table 2 around here-

4.3 Moderating effect of customer affective commitment

To test the validity of H_9, which posits that customer affective commitment has a moderating effect on the relationship between *Perceived Experience* and *Customer Satisfaction*, we ran a moderating regression analysis. In doing so, we used *Customer Satisfaction* as the dependent variable and the other two variables, as well as their product, as independent variables (R^2 = 0.795). The results of the analysis (Table 3) indicate that the dependent variable is influenced positively by Customer Experience ($b = 0.968$, $p < 0.001$) and Customer Affective Commitment ($b = 0.664$, $p < 0.001$). At the same time, it is influenced negatively and significantly by the interaction term which is captured as the product of the other two variables ($b = -0.685$, $p < 0.001$). Therefore, it's reasonable to assume that Customer Affective Commitment has a negative moderating effect, meaning that the more committed the users feel to the company, the less powerful the relationship between experience and satisfaction will be.

-Place Table 3 around here-

5. Discussion

As artificial intelligence gradually but blatantly/drastically becomes the new reality in contemporary world, the resulting services, like AI powered chatbots, are more frequently embedded in marketing strategies and convey value for most types of businesses. Amid the urgent diffusion of new technologies that has been recently noticed in the business landscape, even businesses that have been reluctant to use machines in their interaction with their customers have been increasingly introducing high-tech services. Small family businesses have been traditionally investing on their prominent personal relationships with customers and have been normally lagging behind in using AI powered machines (e.g. chatbots) in their communication with customers; partly for cost reasons or for fear of losing their intimacy with them, but mostly because there is no foundational framework or guide to assist this process. The aim of this study was to debunk this misconception and fill the gap by providing new knowledge on the use of chatbots. The main contribution of the research is, therefore, twofold and it denotes both theoretical and practical implications. First, we present significant predictors of successful chatbots use with reference to customer experience and in turn, customer satisfaction. Then, more

importantly, we demonstrate that the psychological attachment of customers to a small family business, as expressed by customer affective commitment, amplifies the positive effects of experience on satisfaction, signifying that an already strong personal relationship between customers and family businesses may only have positive results.

To begin with, the study has made a significant theoretical contribution by providing new evidence on the successful use of chatbots in small family businesses customer service. Results indicate that certain functional and metaphysical factors are good predictors of customer experience. In relation to functional factors specifically, problem solving, customization and perceived usefulness are positively related to customer experience. Nowadays, customers are sophisticated users of new technologies and text messaging in particular, which has led to businesses incorporating messaging to solve customers' problems. Sensuse et al. (2019) affirm that chatbots have faster response compared to customer care personnel. They can run uninterruptedly, hence, the customer is assured of a quick answer at any time. Additionally, chatbots continuously and uniquely engage with the customers and provide additional information swiftly. With an average decrease in time response, the family business – especially in cases where the business has few to no employees – can ultimately achieve effective problem solving, increase customer experience, and engender customer satisfaction.

Chatbots, of course, should be sophisticated enough to envisage the customers' individual needs, and personalise the way to respond to their enquiries; virtual agents should relate directly to the interests of the customers providing a satisfactory level of customization. As such, the family business may include user-created features to allow the customer to be more in control over who they interact with, in line with the extant literature (e.g. Wald et al., 2021). When they offer customized virtual interaction, they can more actively connect with their customers and, ultimately, improve positive customer experience. Furthermore, results of the effect of perceived usefulness of chatbots on customer experience confirm previous research (Kulviwat et al., 2007; Law et al., 2018). When customers perceive chatbots to be able to provide service of equivalent or higher level compared to employees then once the early stage of adjusting to the technology framework is over, the positive effect will be harvested in all succeeding interactions. In family businesses, if chatbots are used as service assistants with a view to initially compliment employee service, research suggests that perceived usefulness will confirm users' functional acceptance, which is a central domain to user experience (Heerink et al.,2010).

Perceived enjoyment was not found to have a significant effect on customer experience with chatbots in a family business context. Several studies have examined the effect of enjoyment on attitude towards AI technologies in various contexts (Lee & Choi, 2017; Kasilingam, 2020; De Cicco, e Silva & Alparone, 2020), but it seems that its role calls for further clarification for family businesses. While AI chatbots can effectuate humanoid interactions with customers and demonstrate a frontline employee performance, still, enjoyment doesn't seem to be part of what small family business customers would aspire to experience in such an interaction. So, managers should not strive to embed enjoyment in order to alleviate customer experience in this type of communication, but rather focus on other functions of chatbot use, like problem solving or customization. Enjoyment remains a core principle of human-human interaction as well as a critical component of family business-customer relationship (Rose et al., 2012; Bilgihan, Kandampully & Zhang, 2016); in customer-chatbot interactions, enjoyment could be occasionally appreciated albeit not necessarily expected as integral part of positive customer experience.

On the other hand, customer experience from the use of chatbots is also found to be positively influenced by anthropomorphism, social presence and emotions. The study revealed that anthropomorphism of chatbots can lead to positive experiences similar to the extant literature (e.g. Schuetzler et al., 2018; Qiu & Benbasat, 2009). The algorithm behind the development of a chatbot should be sophisticated enough to generate anthropomorphism with a customer (Sheehan, 2018). In order for this interaction to work properly, customers should also be smoothly transferred from in person customer service to the chatbot experience. At the end of the day anthropomorphism is a process where customers are asked to show human-like behaviors towards non-human objects (Waytz et al., 2010) and not the other way around. It is suggested that it should be made clear that the chatbot presents itself as a technological and artificial entity that is less aware than the human interacting with it; evidently the chatbot is not displaying itself at the same conscious level as the user interacting with.

Anthropomorphism may be a useful element but can also be a thwarting variable that prevents customers from embracing chatbots to perform human tasks (Lu et al., 2019). The level of anthropomorphism is subject to further research as researchers have previously raised concerns about the consequences of the high levels of anthropomorphism, which can be perceived as deceitful or insincere (Go and Sundar, 2019; Rosenthal-von der Pütten et al., 2019). Humanlike characteristics should be attributed to AI chatbots until the point where customers start to feel unsettled or uncomfortable and thus end up rejecting the chatbot (Tinwell et al., 2011). In order

to achieve positive customer experience, family business managers should therefore find the delicate balance between customer expectations of the chatbot's capabilities resulting from induced anthropomorphism and delivered customer service quality (Duffy, 2003). In a similar vein, the social presence of the chatbot and the consequent emotions and social interaction will positively effect customer experience. Similar to previous studies the type of interaction experienced with technological devices explains differences in the use of that technology (Venkatesh et al., 2012; Brown and Venkatesh, 2005; Childers et al., 2001). Consistent with the extant literature (e.g. Kang & Lee, 2018), our findings suggest that family business chatbots should embed social skills regardless if they are primarily used to execute a specific automated task; the sense of human contact in the chatbot interaction may be still unable to replace frontline employee service but stimulates emotions that enrich customer experience (van Doorn et al., 2017; Toader et al., 2019). The latter, when achieved, similar to all relevant literature, should be seen as the corner stone of increased customer satisfaction.

What's also noteworthy here, is that our results from small family business customers confirm this positive relation between experience and satisfaction. Small family business managers are, therefore, encouraged to make use of chatbots, albeit with caution not to jeopardise customers experience. They are also encouraged to choose carefully the chatbot technology they are adapting, so that the positive influence of their use becomes amplified and the potential negative consequences are minimized. When chatbots are customized and used with a focus on problem solving and a view to achieve appropriately induced humanness then customers are expected to be more satisfied. This implies that a significant investment in more advanced chatbots technologies, although it may be perceived as an additional cost for family businesses, it will bring increased customer satisfaction and therefore increased loyalty and profitability. More importantly, the customer affective commitment can become an advantage for small family businesses as customers that demonstrate high levels of attachment with the business will be less harsh when expressing their satisfaction as a result of a negative experience. For this to happen, both customer experience and affective commitment should be supported and sustained in parallel. In other words, small business managers should make a thoughtful customer approach through all touchpoints of the customer journey: appropriate use of AI chatbots to achieve positive customer experience alongside with employee-customer personal relationship to reinforce affective commitment. Moreover, a more strategic focus on developing a customer centric approach (i.e. developing customer service culture and competencies) will facilitate the use of chatbots and increase their positive influence. Future research could more thoroughly investigate

the level of anthropomorphism and customization used within a chatbot service in order to test if family business customers would prefer having their own personal chatbot with their own characteristics and specify the type (e.g. facial, personality or emotional) of human attributes added to them to increase homophily. Moreover, future research should incorporate additional predictors of customer satisfaction, deriving from recent studies to offer a more holistic view on the way chatbots can be used effectively. Similarly, future research should investigate additional moderating effects on the relationship between perceived experience with the chatbot and customer satisfaction, such as customer switching costs, loyalty, trust and others.

References

1. Anderson, E. W., & Sullivan, M. W. (1993). The antecedents and consequences of customer satisfaction for firms. *Marketing science*, 12(2), 125-143.
2. Anderson, J. C., & Narus, J. A. (1990). A model of distributor firm and manufacturer firm working partnerships. *Journal of Marketing*, 54(1), 42-58.
3. Anshari, M., Almunawar, M. N., Lim, S. A., & Al-Mudimigh, A. (2019). Customer relationship management and big data enabled: Personalization & customization of services. *Applied Computing and Informatics*, 15(2), 94-101.
4. Araujo, T. (2018). Living up to the chatbot hype: The influence of anthropomorphic design cues and communicative agency framing on conversational agent and company perceptions. *Computers in Human Behavior*, 85, 183-189.
5. Araújo, T., & Casais, B. (2020). Customer acceptance of shopping-assistant chatbots. In *Marketing and Smart Technologies* (pp. 278-287). Springer, Singapore.
6. Ashforth, B. E., & Humphrey, R. H. (1997). The ubiquity and potency of labelling in organizations. *Organization Science*, 8(1), 43-58.
7. Astrachan, J. H., & Shanker, M. C. (2003). Family businesses' contribution to the US economy: A closer look. *Family Business Review*, *16*(3), 211-219.
8. Bansal, H. S., Irving, P. G., & Taylor, S. F. (2004). A three-component model of customer to service providers. *Journal of the Academy of marketing Science*, 32(3), 234-250.
9. Beattie, A., Edwards, A. P., & Edwards, C. (2020). A bot and a smile: Interpersonal impressions of chatbots and humans using emoji in computer-mediated communication. *Communication Studies*, 71(3), 409-427.

10. Bilgihan, A., Kandampully, J., & Zhang, T. C. (2016). Towards a unified customer experience in online shopping environments: Antecedents and outcomes. *International Journal of Quality and Service Sciences*, 8(1), 102-119.
11. Bleier, A., Harmeling, C. M., & Palmatier, R. W. (2019). Creating effective online customer experiences. *Journal of Marketing*, 83(2), 98-119.
12. Bolton, R. N., McColl-Kennedy, J. R., Cheung, L., Gallan, A., Orsingher, C., Witell, L., & Zaki, M. (2018). Customer experience challenges: bringing together digital, physical and social realms. *Journal of Service Management*, 29(5), 776-808.
13. Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand experience: what is it? How is it measured? Does it affect loyalty?. *Journal of Marketing*, 73(3), 52-68.
14. Brill, T. M., Munoz, L., & Miller, R. J. (2019). Siri, Alexa, and other digital assistants: a study of customer satisfaction with artificial intelligence applications. Journal of Marketing Management, 35(15-16), 1401-1436.
15. Brown, S. A., & Venkatesh, V. (2005). Model of adoption of technology in households: A baseline model test and extension incorporating household life cycle. *MIS quarterly*, 399-426.
16. Cameron, A. C., & Trivedi, P. K. (2005). *Microeconometrics: methods and applications*. Cambridge: Cambridge university press.
17. Chakrabarty, S., Widing, R. E., & Brown, G. (2014). Selling behaviours and sales performance: the moderating and mediating effects of interpersonal mentalizing. *Journal of Personal Selling & Sales Management*, 34(2), 112-122.
18. Chang, Y. W., Hsu, P. Y., & Lan, Y. C. (2019). Cooperation and competition between online travel agencies and hotels. *Tourism Management*, 71, 187-196.
19. Cheatham, B., Javanmardian, K., & Samandari H. (2019). *Confronting the risks of artificial intelligence.* McKinsey Quarterly. https://www.mckinsey.com/business-functions/mckinsey-analytics/our-insights/confronting-the-risks-of-artificial-intelligence [Accessed 1 October 2021].
20. Chen, C. C., Olfman, L., & Harris, A. (2005). Differential impacts of social presence on the behavior modeling approach. *International Journal of Technology and Human Interaction*, 1(2), 64-84.
21. Childers, T. L., Carr, C. L., Peck, J., & Carson, S. (2001). Hedonic and utilitarian motivations for online retail shopping behavior. *Journal of Retailing*, 77(4), 511-535.

22. Chiou, J. S., & Droge, C. (2006). Service quality, trust, specific asset investment, and expertise: Direct and indirect effects in a satisfaction-loyalty framework. *Journal of the academy of marketing science*, 34(4), 613-627.
23. Chua, J. H., Chrisman, J. J., & Sharma, P. (1999). Defining the family business by behaviour. *Entrepreneurship Theory and Practice*, *23*(4), 19-39.
24. Chung, M., Ko, E., Joung, H., & Kim, S. J. (2020). Chatbot e-service and customer satisfaction regarding luxury brands. *Journal of Business Research*, 117, 587-595.
25. Cooper, M. J., Upton, N., & Seaman, S. (2005). Customer relationship management: A comparative analysis of family and nonfamily business practices. *Journal of Small Business Management*, 43(3), 242-256.
26. Covin, J. G., Eggers, F., Kraus, S., Cheng, C. F., & Chang, M. L. (2016). Marketing-related resources and radical innovativeness in family and non-family firms: A configurational approach. *Journal of Business Research*, *69*(12), 5620-5627.
27. Craig, J. B., & Salvato, C. (2012). The distinctiveness, design, and direction of family business research: Insights from management luminaries. *Family Business Review*, 25(1), 109-116.
28. Crolic, C., Thomaz, F., Hadi, R., & Stephen, A. T. (2022). Blame the Bot: Anthropomorphism and Anger in Customer–Chatbot Interactions. *Journal of Marketing*, 86(1), 132-148.
29. Danckwerts, S., Meißner, L., & Krampe, C. (2019). Examining user experience of conversational agents in hedonic digital services–antecedents and the role of psychological ownership. *Journal of Service Management Research*, 3(3), 111-125.
30. Davenport, T., Guha, A., Grewal, D., & Bressgott, T. (2020). How artificial intelligence will change the future of marketing. *Journal of the Academy of Marketing Science*, 48(1), 24-42.
31. Davis, F. D. (1985). *A technology acceptance model for empirically testing new end-user information systems: Theory and results* (Doctoral dissertation, Massachusetts Institute of Technology).
32. Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management science*, 35(8), 982-1003.
33. De Cicco, R., e Silva, S. C., & Alparone, F. R. (2020). Millennials' attitude toward chatbots: an experimental study in a social relationship perspective. *International Journal of Retail & Distribution Management*, 48(11), 1213-1233.

34. De Wulf, K., Odekerken-Schröder, G., & Iacobucci, D. (2001). Investments in consumer relationships: A cross-country and cross-industry exploration. *Journal of Marketing*, 65(4), 33-50.
35. Dolgov, I., Graves, W. J., Nearents, M. R., Schwark, J. D., & Brooks Volkman, C. (2014). Effects of cooperative gaming and avatar customization on subsequent spontaneous helping behavior. *Computers in Human Behavior*, 33, 49–55.
36. Duffy, B. R. (2003). Anthropomorphism and the social robot. *Robotics and autonomous systems*, 42(3-4), 177-190.
37. Dyer Jr, W. G., & Dyer, W. J. (2009). Putting the family into family business research. *Family Business Review*, 22(3), 216-219.
38. Edvardsson, B. (2005). Service quality: beyond cognitive assessment. *Managing Service Quality: An International Journal*, 15(2), 127-131.
39. Emmers-Sommer, T. M. (2004). The effect of communication quality and quantity indicators on intimacy and relational satisfaction. *Journal of Social and Personal Relationships*, 21(3), 399-411.
40. Epley, N., Waytz, A., Akalis, S., & Cacioppo, J. T. (2008). When we need a human: Motivational determinants of anthropomorphism. *Social Cognition*, 26(2), 143-155.
41. Evans, M. (2019). *5 Key Stats to Place the Profound Impact of Technology*. Euromonitor International. https://www.euromonitor.com/article/5-key-stats-to-place-the-profound-impact-of-technology [Accessed 1 October 2021].
42. Friedland, J. (2019). Activating moral agency by design: A model for ethical AI development. *MIT Sloan Management Review*, 60(4).
43. Fullerton, G. (2003). When does commitment lead to loyalty?. *Journal of Service Research*, 5(4), 333-344.
44. Fullerton, G. (2005). How commitment both enables and undermines marketing relationships. *European Journal of Marketing*, 39(11/12), 1372-1388.
45. Ganster, T., Eimler, S. C., & Krämer, N. C. (2012). Same same but different!? The differential influence of smilies and emoticons on person perception. *Cyberpsychology, Behavior, and Social Networking*, 15(4), 226-230.
46. Garbarino, E., & Johnson, M. S. (1999). The different roles of satisfaction, trust, and commitment in customer relationships. *Journal of Marketing*, 63(2), 70-87.
47. Garg, R., Rahman, Z., & Qureshi, M. N. (2014). Measuring customer experience in banks: scale development and validation. *Journal of Modelling in Management*, 9(1), 87-117.

48. Gefen, D., & Straub, D. (2003). Managing user trust in B2C e-services. *e-Service*, 2(2), 7-24.
49. Giebelhausen, M., Robinson, S. G., Sirianni, N. J., & Brady, M. K. (2014). Touch versus tech: When technology functions as a barrier or a benefit to service encounters. *Journal of Marketing*, *78*(4), 113-124.
50. Gilboa, S., Seger-Guttmann, T., & Mimran, O. (2019). The unique role of relationship marketing in small businesses' customer experience. *Journal of Retailing and Consumer Services*, 51, 152-164.
51. Glyptis, L., Hadjielias, E., Christofi, M., Kvasova, O., & Vrontis, D. (2021). Dynamic familiness capabilities and family business growth: A longitudinal perspective framed within management accounting. *Journal of Business Research*, 127, 346-363.
52. Go, E., & Sundar, S. S. (2019). Humanizing chatbots: The effects of visual, identity and conversational cues on humanness perceptions. *Computers in Human Behavior*, *97*, 304-316.
53. Go, E., & Sundar, S. S. (2019). Humanizing chatbots: The effects of visual, identity and conversational cues on humanness perceptions. *Computers in Human Behavior*, 97, 304-316.
54. Gray, J. H., Reardon, E., & Kotler, J. A. (2017, June). Designing for parasocial relationships and learning: Linear video, interactive media, and artificial intelligence. In *Proceedings of the 2017 Conference on Interaction Design and Children* (pp. 227-237).
55. Gundlach, G. T., Achrol, R. S., & Mentzer, J. T. (1995). The structure of commitment in exchange. *Journal of Marketing*, 59(1), 78-92.
56. Gunkel, D. J. (2012). Communication and artificial intelligence: Opportunities and challenges for the 21st century. *Communication+ 1*, 1(1), 1-25.
57. Gursoy, D., Chi, O. H., Lu, L., & Nunkoo, R. (2019). Consumers acceptance of artificially intelligent (AI) device use in service delivery. *International Journal of Information Management*, 49, 157-169.
58. Guzman, A. L. (2018). What is human-machine communication, anyway? *Human-machine communication: Rethinking Communication, Technology, And Ourselves*, 1-28.
59. Guzman, A. L. (2020). Ontological boundaries between humans and computers and the implications for human-machine communication. *Human-Machine Communication*, 1(1), 3.
60. Guzman, A. L., & Lewis, S. C. (2020). Artificial intelligence and communication: A Human–Machine Communication research agenda. *New Media & Society*, 22(1), 70-86.

61. Haas, A., & Kenning, P. (2014). Utilitarian and hedonic motivators of shoppers' decision to consult with salespeople. *Journal of Retailing*, 90(3), 428-441.
62. Hadjielias, E., Christofi, M., Vrontis, D., & Khan, H. (2022). Social impact through family firms' interorganizational relationships within a community and a cooperative: An embedded view of stewardship. *Journal of Business Research*, 139, 584-601.
63. Hadjielias, E., Christofi, M., & Tarba, S. (2021). Knowledge hiding and knowledge sharing in small family farms: A stewardship view. *Journal of Business Research*, 137, 279-292.
64. Hackbarth, G., Grover, V., & Mun, Y. Y. (2003). Computer playfulness and anxiety: positive and negative mediators of the system experience effect on perceived ease of use. *Information & management*, 40(3), 221-232.
65. Handler, W. C. (1989). Methodological issues and considerations in studying family businesses. *Family Business Review*, 2(3), 257-276.
66. Harman, H. H. (1976). *Modern factor analysis*. University of Chicago press.
67. Harrison-Walker, L. J. (2001). The measurement of word-of-mouth communication and an investigation of service quality and customer commitment as potential antecedents. *Journal of service research*, 4(1), 60-75.
68. Hassanein, K., & Head, M. (2007). Manipulating perceived social presence through the web interface and its impact on attitude towards online shopping. *International journal of human-computer studies*, 65(8), 689-708.
69. He, R. (2020). *Beyond Human: Embracing AI-driven Technology*. *Euromonitor International*. https://www.euromonitor.com/article/beyond-human-embracing-ai-driven-technology [Accessed 1 October 2021].
70. Heck, R. K., & Trent, E. S. (1999). The prevalence of family business from a household sample. *Family Business Review*, 12(3), 209-219.
71. Heerink, M., Kröse, B., Evers, V., & Wielinga, B. (2010). Assessing acceptance of assistive social agent technology by older adults: the almere model. *International Journal of Social Robotics*, 2(4), 361-375.
72. Hoffman, D. L., & Novak, T. P. (2009). Flow online: lessons learned and future prospects. *Journal of interactive marketing*, 23(1), 23-34.
73. Homburg, C., Jozić, D., & Kuehnl, C. (2017). Customer experience management: toward implementing an evolving marketing concept. *Journal of the Academy of Marketing Science*, 45(3), 377-401.

74. Hoover, E.A., & Hoover, C. L.(1999). What You See Ahead. *Family Business Magazine*, 11(4), 31.
75. Hsiao, C. H., Chang, J. J., & Tang, K. Y. (2016). Exploring the influential factors in continuance usage of mobile social Apps: Satisfaction, habit, and customer value perspectives. *Telematics and Informatics*, 33(2), 342-355.
76. Huang, M. H., & Rust, R. T. (2018). Artificial intelligence in service. *Journal of Service Research*, 21(2), 155-172.
77. IFB Research Foundation (2020). *The State of the Nation: The UK Family Business Sector 2019–2020*. https://www.ifb.org.uk/media/4306/the-family-business-sector-report-2019-20-briefing.pdf [Accessed 20 September 2021].
78. Jaakkola, E., Helkkula, A., & Aarikka-Stenroos, L. (2015). Understanding and advancing service experience co-creation. *Journal of Service Management*, 26(2).
79. Jain, R., Aagja, J., & Bagdare, S. (2017). Customer experience–a review and research agenda. *Journal of Service Theory and Practice*, 27(3), 642-662.
80. Jan, A. U., & Contreras, V. (2011). Technology acceptance model for the use of information technology in universities. *Computers in Human Behavior*, 27(2), 845-851.
81. Johnson, M. D., Herrmann, A., & Huber, F. (2006). The evolution of loyalty intentions. *Journal of Marketing*, 70(2), 122-132.
82. Kang, Y. J., & Lee, W. J. (2018). Effects of sense of control and social presence on customer experience and e-service quality. *Information Development*, 34(3), 242-260.
83. Kasilingam, D. L. (2020). Understanding the attitude and intention to use smartphone chatbots for shopping. *Technology in Society*, 62, 101280.
84. Kelley, S. W., & Davis, M. A. (1994). Antecedents to customer expectations for service recovery. *Journal of the academy of Marketing Science*, 22(1), 52-61.
85. Khalifa, M., & Shen, K. N. (2008). Explaining the adoption of transactional B2C mobile commerce. *Journal of Enterprise Information Management*, 21(2), 110-124.
86. Kiesler, S., Powers, A., Fussell, S. R., & Torrey, C. (2008). Anthropomorphic interactions with a robot and robot–like agent. *Social Cognition*, *26*(2), 169-181.
87. Kim, H. S., & Choi, B. (2016). The effects of three customer-to-customer interaction quality types on customer experience quality and citizenship behavior in mass service settings. *Journal of Services Marketing*, 30(4), 384-397.
88. King, W. R., & He, J. (2006). A meta-analysis of the technology acceptance model. *Information & management*, *43*(6), 740-755.

89. Klaus, P. P., & Maklan, S. (2013). Towards a better measure of customer experience. *International Journal of Market Research*, 55(2), 227-246.
90. Klein, S. B., Astrachan, J. H., & Smyrnios, K. X. (2005). The F–PEC scale of family influence: Construction, validation, and further implication for theory. *Entrepreneurship theory and practice*, 29(3), 321-339.
91. Koh, Y. J., & Sundar, S. S. (2010). Effects of specialization in computers, web sites, and web agents on e-commerce trust. *International Journal of Human-Computer Studies*, 68(12), 899-912.
92. Kulviwat, S., Bruner II, G. C., Kumar, A., Nasco, S. A., & Clark, T. (2007). Toward a unified theory of consumer acceptance technology. *Psychology & Marketing*, 24(12), 1059-1084.
93. Kumar, V., Singh, D., Purkayastha, A., Popli, M., & Gaur, A. (2020). Springboard internationalization by emerging market firms: Speed of first cross-border acquisition. *Journal of International Business Studies*, *51*(2), 172-193.
94. Lazarus, R. S. (1991). Cognition and motivation in emotion. *American psychologist*, 46(4), 352-367.
95. Lee, J. S., Kang, N. R., Kim, H. J., & Kwak, Y. S. (2018). Discriminative effects of social skills training on facial emotion recognition among children with attention-deficit/hyperactivity disorder and autism spectrum disorder. *Journal of the Korean Academy of Child and Adolescent Psychiatry*, 29(4), 150-160.
96. Lee, L., Inman, J. J., Argo, J. J., Böttger, T., Dholakia, U., Gilbride, T., & Tsai, C. I. (2018). From browsing to buying and beyond: The needs-adaptive shopper journey model. *Journal of the Association for Consumer Research*, 3(3), 277-293.
97. Lee, S., & Choi, J. (2017). Enhancing user experience with conversational agent for movie recommendation: Effects of self-disclosure and reciprocity. *International Journal of Human-Computer Studies*, 103, 95-105.
98. Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, *80*(6), 69-96.
99. Lewis, S. C., Guzman, A. L., & Schmidt, T. R. (2019). Automation, journalism, and human–machine communication: Rethinking roles and relationships of humans and machines in news. *Digital Journalism*, 7(4), 409-427.
100. Li, H., Liu, Y., Tan, C. W., & Hu, F. (2020). Comprehending customer satisfaction with hotels: Data analysis of consumer-generated reviews. *International Journal of Contemporary Hospitality Management*, 32(5), 1713-1735.

101. Litz, R. A. (1997). The family firm's exclusion from business school research: Explaining the void; addressing the opportunity. *Entrepreneurship Theory and Practice*, 21(3), 55-71.

102. Lu, B., Fan, W., & Zhou, M. (2016). Social presence, trust, and social commerce purchase intention: An empirical research. *Computers in Human Behavior*, 56, 225-237.

103. Lu, L., Cai, R., & Gursoy, D. (2019). Developing and validating a service robot integration willingness scale. *International Journal of Hospitality Management*, 80, 36-51.

104. Lude, M., & Prügl, R. (2018). Why the family business brand matters: Brand authenticity and the family firm trust inference. *Journal of Business Research*, *89*, 121-134.

105. Luo, X., Tong, S., Fang, Z., & Qu, Z. (2019). Frontiers: Machines vs. humans: The impact of artificial intelligence chatbot disclosure on customer purchases. *Marketing Science*, 38(6), 937-947.

106. Marangunić, N., & Granić, A. (2015). Technology acceptance model: a literature review from 1986 to 2013. *Universal access in the information society*, 14(1), 81-95.

107. Martin, J., Mortimer, G., & Andrews, L. (2015). Re-examining online customer experience to include purchase frequency and perceived risk. *Journal of Retailing and Consumer Services*, 25, 81-95.

108. McLean, G., & Osei-Frimpong, K. (2017). Examining satisfaction with the experience during a live chat service encounter-implications for website providers. *Computers in Human Behavior*, *76*, 494-508.

109. Mclean, G., Al-Nabhani, K., & Wilson, A. (2018). Developing a mobile applications customer experience model (MACE)-implications for retailers. *Journal of Business Research*, 85, 325-336.

110. Meuter, M. L., Ostrom, A. L., Roundtree, R. I., & Bitner, M. J. (2000). Self-service technologies: understanding customer satisfaction with technology-based service encounters. *Journal of Marketing*, 64(3), 50-64.

111. Meyer, C., & Schwager, A. (2007). Understanding customer experience. *Harvard business review*, *85*(2), 116.

112. Mittal, V., Ross Jr, W. T., & Baldasare, P. M. (1998). The asymmetric impact of negative and positive attribute-level performance on overall satisfaction and repurchase intentions. *Journal of marketing*, 62(1), 33-47.

113. Mochon, D., Norton, M. I., & Ariely, D. (2012). Bolstering and restoring feelings of competence via the IKEA effect. *International Journal of Research in Marketing*, 29, 363-369.

114. Morgeson, F. V. (2012). Expectations, disconfirmation, and citizen satisfaction with the US federal government: Testing and expanding the model. *Journal of Public Administration Research and Theory*, 23(2), 289-305.
115. Moriuchi, E., Landers, V. M., Colton, D., & Hair, N. (2021). Engagement with chatbots versus augmented reality interactive technology in e-commerce. *Journal of Strategic Marketing*, 29(5), 375-389.
116. Mowday, R. T., Steers, R. M., & Porter, L. W. (1979). The measurement of organizational commitment. *Journal of Vocational Behavior*, 14(2), 224-247.
117. Muntinga, D. G., Moorman, M., & Smit, E. G. (2011). Introducing COBRAs: Exploring motivations for brand-related social media use. *International Journal of Advertising*, 30(1), 13-46.
118. Nass, C. (2004). Etiquette equality: exhibitions and expectations of computer politeness. *Communications of the ACM*, 47(4), 35-37.
119. Nass, C., & Moon, Y. (2000). Machines and mindlessness: Social responses to computers. *Journal of social issues*, 56(1), 81-103.
120. Ogara, S. O., Koh, C. E., & Prybutok, V. R. (2014). Investigating factors affecting social presence and user satisfaction with mobile instant messaging. *Computers in Human Behavior*, 36, 453-459.
121. Oliva, T. A., Oliver, R. L., & MacMillan, I. C. (1992). A catastrophe model for developing service satisfaction strategies. *Journal of Marketing*, 56(3), 83-95.
122. Oliver, R. L. (1977). Effect of expectation and disconfirmation on postexposure product evaluations: An alternative interpretation. *Journal of applied psychology*, *62*(4), 480-486.
123. Oliver, R. L. (1981). Measurement and evaluation of satisfaction process in retail setting. *Journal of Retailing*, 57, 25–48.
124. Oraedu, C. (2017). *Customer relationship quality and word-of-mouth behaviour: A study of the Nigerian telecom industry* (Doctoral dissertation, MSc dissertation, Ebonyi State University).
125. Orth, U. R., & Green, M. T. (2009). Consumer loyalty to family versus non-family business: The roles of store image, trust and satisfaction. *Journal of Retailing and Consumer Services*, 16(4), 248-259.
126. Overby, J. W., & Lee, E. J. (2006). The effects of utilitarian and hedonic online shopping value on consumer preference and intentions. *Journal of Business research*, 59(10-11), 1160-1166.

127. Pantano, E., & Pizzi, G. (2020). Forecasting artificial intelligence on online customer assistance: Evidence from chatbot patents analysis. *Journal of Retailing and Consumer Services*, 55, 102096.
128. Papacharissi, Z. (2019). *A Networked Self and Human Augmentics, Artificial Intelligence, Sentience*, New York: Routledge.
129. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41-50.
130. Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1985). A Conceptual Model of Service Quality and its Implications for Future Research. *Journal of Marketing* 49 (Fall):41-50.
131. Peters, J. D. (1999). Speaking into the Air: A History of the Idea of Communication. Chicago: University of Chicago Press.
132. Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 885(879), 10-1037.
133. Podsakoff, N. P., MacKenzie, S. B., Lee, J.Y.., & Podsakoff, N. P. (2003). Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, *885*(879), 10-1037.
134. Porter, L. W., Steers, R. M., Mowday, R. T., & Boulian, P. V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology*, *59*(5), 603-609.
135. Prentice, C., Weaven, S., & Wong, I. A. (2020). Linking AI quality performance and customer engagement: The moderating effect of AI preference. *International Journal of Hospitality Management*, 90, 102629.
136. Price, L. L., & Arnould, E. J. (1999). Commercial friendships: Service provider–client relationships in context. *Journal of Marketing*, 63(4), 38-56.
137. Qiu, L., & Benbasat, I. (2009). Evaluating anthropomorphic product recommendation agents: A social relationship perspective to designing information systems. *Journal of Management Information Systems*, 25(4), 145-182.
138. Rese, A., Baier, D., Geyer-Schulz, A., & Schreiber, S. (2017). How augmented reality apps are accepted by consumers: A comparative analysis using scales and opinions. *Technological Forecasting and Social Change*, 124, 306-319.
139. Reuber, A. R., & Fischer, E. (2011). Marketing (in) the family firm. *Family Business Review*, 24, 193-196.

140. Richardson, A. (2010). Using customer journey maps to improve customer experience. *Harvard business review*, *15*(1), 2-5.
141. Riskin, J. (2007) *Genesis Redux: Essays in the History and Philosophy of Artificial Life*. Chicago: University of Chicago Press.
142. Rogers, E. M. (1997). *A History of Communication Study: A Biographical Approach*. New York: Free Press
143. Rose, S., Hair, N., & Clark, M. (2011). Online customer experience: A review of the business-to-consumer online purchase context. *International Journal of Management Reviews*, 13(1), 24-39.
144. Rosenthal-Von Der Pütten, A. M., Schulte, F. P., Eimler, S. C., Sobieraj, S., Hoffmann, L., Maderwald, S., ... & Krämer, N. C. (2014). Investigations on empathy towards humans and robots using fMRI. *Computers in Human Behavior*, 33, 201-212.
145. Rust, R.T., Zeithaml, V.A., & Lemon, K.N. (2000). *Driving Customer Equity*, New York: The Free Press.
146. Salehi, M., Salimi, M., & Haque, A. (2013). The impact of online customer experience (OCE) on service quality in Malaysia. *World Applied Sciences Journal*, 21(11), 1621-1631.
147. Scherer, R., Siddiq, F., & Tondeur, J. (2019). The technology acceptance model (TAM): A meta-analytic structural equation modeling approach to explaining teachers' adoption of digital technology in education. *Computers & Education*, 128, 13-35.
148. Schmitt, B., Brakus, J. J., & Zarantonello, L. (2015). From experiential psychology to consumer experience. *Journal of Consumer Psychology*, 25(1), 166-171.
149. Schmitt, B.H. (1999). *Experiential Marketing*. New York: The Free Press.
150. Schuetzler, R. M., Grimes, G. M., Giboney, J. S., & Nunamaker Jr, J. F. (2018). The influence of conversational agents on socially desirable responding. In *Proceedings of the 51st Hawaii International Conference on System Sciences* (p. 283).
151. Seeger, A. M., & Heinzl, A. (2018). Human versus machine: Contingency factors of anthropomorphism as a trust-inducing design strategy for conversational agents. In *Information systems and neuroscience* (pp. 129-139). Springer, Cham.
152. Sensuse, D. I., Dhevanty, V., Rahmanasari, E., Permatasari, D., Putra, B. E., Lusa, J. S., ... & Prima, P. (2019). Chatbot evaluation as knowledge application: a case study of PT ABC. In *2019 11th International Conference on Information Technology and Electrical Engineering (ICITEE)* (pp. 1-6). IEEE.

153. Shankar, V. (2014). Shopper marketing 2.0: opportunities and challenges. *Review of Marketing Research*, 11, 189–208.
154. Sharma, P., Hoy, F., Astrachan, J. H., & Koiranen, M. (2007). The practice-driven evolution of family business education. *Journal of Business Research*, 60(10), 1012-1021.
155. Sharma, P., Nordqvist, M. (2008). A classification scheme for family firms: From family values to effective governance to firm performance. In Tàpies, J. & Ward, J. L (Eds.), *Family values and value creation: The fostering of enduring values within family-owned businesses* (pp. 71-101). New York, NY: Palgrave Macmillan.
156. Sheehan, B., Jin, H. S., & Gottlieb, U. (2020). Customer service chatbots: Anthropomorphism and adoption. *Journal of Business Research*, 115, 14-24.
157. Shevat, A. (2017). *Designing bots: Creating conversational experiences*. O'Reilly Media, Inc.
158. Shi, Y., Prentice, C., & He, W. (2014). Linking service quality, customer satisfaction and loyalty in casinos, does membership matter?. *International Journal of Hospitality Management*, *40*, 81-91.
159. Shobeiri, S., Mazaheri, E., & Laroche, M. (2018). Creating the right customer experience online: The influence of culture. *Journal of Marketing Communications*, 24(3), 270-290.
160. Short, J., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. London: John Wiley & Sons
161. Solomon, M. R., Surprenant, C., Czepiel, J. A., & Gutman, E. G. (1985). A role theory perspective on dyadic interactions: the service encounter. *Journal of Marketing*, 49(1), 99-111.
162. Spence, P. R. (2019). Searching for questions, original thoughts, or advancing theory: Human-machine communication. *Computers in Human Behaviour*, 90, 285-287.
163. Suchman, L.A. (2009). *Human-Machine Reconfigurations: Plans and Situated Actions*. 2nd ed. New York: Cambridge University Press.
164. Sun, H., & Zhang, P. (2008). An exploration of affect factors and their role in user technology acceptance: Mediation and causality. *Journal of the American society for information science and technology*, 59(8), 1252-1263.
165. Sundar, S. S. (2008). The MAIN model: A heuristic approach to understanding technology effects on credibility. In M. J. Metzger, & A. J. Flanagin (Eds.), *Digital Media, Youth, And Credibility* (pp. 73–100). Cambridge: The MIT Press

166. Sutoyo, R., Chowanda, A., Kurniati, A., & Wongso, R. (2019). Designing an emotionally realistic chatbot framework to enhance its believability with AIML and information states. *Procedia Computer Science*, 157, 621-628.
167. Szymanski, D. M., & Henard, D. H. (2001). Customer satisfaction: A meta-analysis of the empirical evidence. *Journal of the Academy of Marketing Science*, 29(1), 16-35.
168. Teng, C. (2010). Customization, immersion satisfaction, and online gamer loyalty. *Computers in Human Behavior*, 26(6), 1547–1554.
169. Thrassou, A., Vrontis, D., & Bresciani, S. (2018). The agile innovation pendulum: family business innovation and the human, social, and marketing capitals. *International Studies of Management & Organization*, 48(1), 88-104.
170. Tinwell, A., Grimshaw, M., & Williams, A. (2011). Uncanny speech. In *Game sound technology and player interaction: Concepts and developments* (pp. 213-234). IGI global.
171. Toader, D. C., Boca, G., Toader, R., Măcelaru, M., Toader, C., Ighian, D., & Rădulescu, A. T. (2019). The effect of social presence and chatbot errors on trust. *Sustainability*, 12(1), 1-1.
172. Touré-Tillery, M., & McGill, A. L. (2015). Who or what to believe: Trust and the differential persuasiveness of human and anthropomorphized messengers. *Journal of Marketing*, *79*(4), 94-110.
173. Trivedi, J. (2019). Examining the customer experience of using banking chatbots and its impact on brand love: the moderating role of perceived risk. *Journal of internet Commerce*, 18(1), 91-111.
174. Ugwuanyi, C. C., Uduji, J. I., & Oraedu, C. (2021). Customer experience with self-service technologies in the banking sector: evidence from Nigeria. *International Journal of Business and Systems Research*, *15*(4), 405-425.
175. Van Belleghem, S. (2017). *Customers the Day after Tomorrow: How to Attract Customers in a World of AIs, Bots, and Automation*. Tielt: Lannoo Publishers.
176. Van Doorn, J., Mende, M., Noble, S. M., Hulland, J., Ostrom, A. L., Grewal, D., & Petersen, J. A. (2017). Domo arigato Mr. Roboto: Emergence of automated social presence in organizational frontlines and customers' service experiences. *Journal of service research*, 20(1), 43-58.
177. Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating control, intrinsic motivation, and emotion into the technology acceptance model. *Information systems research*, 11(4), 342-365.

178. Venkatesh, V., Speier, C., & Morris, M. G. (2002). User acceptance enablers in individual decision making about technology: Toward an integrated model. *Decision sciences*, 33(2), 297-316.
179. Venkatesh, V., Thong, J. Y., & Xu, X. (2012). Consumer acceptance and use of information technology: extending the unified theory of acceptance and use of technology. *MIS quarterly*, 157-178.
180. Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of retailing*, 85(1), 31-41.
181. Wald, R., Heijselaar, E., & Bosse, T. (2021, June). Make your own: The Potential of Chatbot Customization for the Development of User Trust. In *Adjunct Proceedings of the 29th ACM Conference on User Modeling, Adaptation and Personalization* (pp. 382-387).
182. Wang, S. T., & Li, M. H. (2012). Analysis of cost models and quantification models of customisation degree after VMI strategy implemented in different industries. *International Journal Of Manufacturing Technology and Management*, *26*(1-4), 161-175.
183. Ward, J. L., & Aronoff, C. E. (1991). Trust gives you the advantage. *Nation's Business*, 79(8), 42-45.
184. Waytz, A., Cacioppo, J., & Epley, N. (2010). Who sees human? The stability and importance of individual differences in anthropomorphism. *Perspectives on Psychological Science*, 5(3), 219-232.
185. Waytz, A., Epley, N., & Cacioppo, J. T. (2010). Social cognition unbound: Insights into anthropomorphism and dehumanization. *Current Directions in Psychological Science*, 19(1), 58-62.
186. Weil, P. (2017). The blurring test. In: Gehl, RW, Bakardjieva, M (eds) *Socialbots and Their Friends: Digital Media and the Automation of Sociality*. New York: Routledge, pp. 19–46.
187. Westhead, P., & Cowling, M. (1998). Family firm research: The need for a methodological rethink. *Entrepreneurship Theory and Practice*, 23(1), 31-56.
188. Wetzels, M., De Ruyter, K., & Lemmink, J. (2000). Measuring service quality trade-offs in Asian distribution channels: A multi-layer perspective. *Total Quality Management*, 11(3), 307-318.
189. White, S. S., & Schneider, B. (2000). Climbing the commitment ladder: the role of expectations disconfirmation on customers' behavioral intentions. *Journal of Service Research*, 2(3), 240-253.

190. Willems, K., Smolders, A., Brengman, M., Luyten, K., & Schöning, J. (2017). The path-to-purchase is paved with digital opportunities: An inventory of shopper-oriented retail technologies. *Technological Forecasting and Social Change*, 124, 228-242.
191. Wilson, H. J., Daugherty, P. R., & Morini-Bianzino, N. (2017). *Will AI create as many jobs as it eliminates.* MIT Sloan Management Review. https://sloanreview.mit.edu/article/will-ai-create-as-many-jobs-as-it-eliminates/ [Accessed 1 October 2021].
192. Wirtz, J., Patterson, P. G., Kunz, W. H., Gruber, T., Lu, V. N., Paluch, S., & Martins, A. (2018). Brave new world: service robots in the frontline. *Journal of Service Management*. 29(5), 907-931.
193. Wu, J. H., & Wang, S. C. (2005). What drives mobile commerce?: An empirical evaluation of the revised technology acceptance model. *Information & management*, 42(5), 719-729.
194. Ye, S., Ying, T., Zhou, L., & Wang, T. (2019). Enhancing customer trust in peer-to-peer accommodation: A "soft" strategy via social presence. *International Journal of Hospitality Management*, 79, 1-10.
195. Ying, S., Sindakis, S., Aggarwal, S., Chen, C., & Su, J. (2021). Managing big data in the retail industry of Singapore: Examining the impact on customer satisfaction and organizational performance. *European Management Journal*, 39(3), 390-400.
196. Young, G. J., Meterko, M. M., Mohr, D., Shwartz, M., & Lin, H. (2009). Congruence in the assessment of service quality between employees and customers: A study of a public health care delivery system. *Journal of Business Research*, 62(11), 1127-1135.
197. Zarantonello, L., & Schmitt, B. H. (2010). Using the brand experience scale to profile consumers and predict consumer behaviour. *Journal of Brand Management*, 17(7), 532-540.
198. Zhang, L., Zhu, J., & Liu, Q. (2012). A meta-analysis of mobile commerce adoption and the moderating effect of culture. *Computers in human Behavior*, *28*(5), 1902-1911.

Figure 1. Conceptual Framework

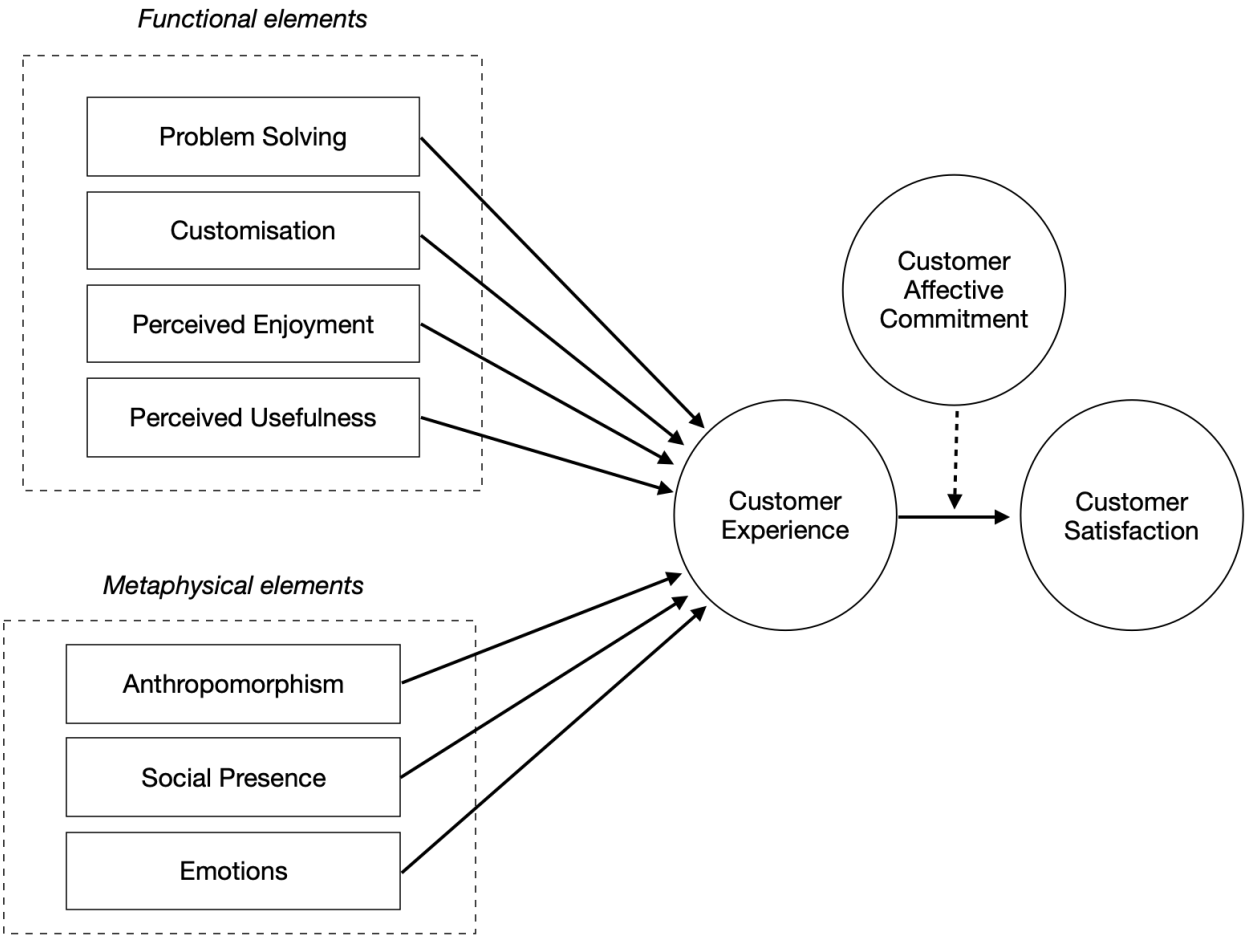

Table 1: *Descriptive statistics, validity and reliability*

Constructs	*Mean*	*St Dev*	*Skewness*	*Kurtosis*	*CR*	*Cronbach a*	*AVE*
Problem Solving	4.968	1.358	-0.874	0.285	0.894	0.889	0.738
Customization	5.803	1.067	-1.508	1.986	0.915	0.915	0.783
Perceived Enjoyment	5.493	1.121	-1.394	1.714	0.921	0.921	0.796
Perceived Usefulness	5.465	1.099	-1.357	1.612	0.925	0.925	0.756
Anthropomorphism	5.524	1.077	-1.556	2.172	0.944	0.943	0.809
Emotions	5.601	1.112	-1.622	2.283	0.930	0.928	0.768
Social Presence	5.525	1.083	-1.707	2.607	0.924	0.923	0.802
Customer Experience	5.540	1.191	-1.330	1.727	0.738	0.933	0.484
Customer Satisfaction	5.794	1.067	-1.576	2.206	0.786	0.925	0.551
Customer Affective Commitment	5.612	1.102	-1.749	2.730	0.946	0.946	0.815

Table 2: *Fit indices and regression weights for the path model*

Goodness of Fit:

X^2= 6191.68, df=397, CFI=0.927, TLI=0.920

RMSEA=0.089

	Estimate	*SE*	*T*	*R^2*
Problem Solving → Customer Experience	0.073	0.013	5.432*	
Customization → Customer Experience	0.437	0.031	13.897*	
Perceived Enjoyment → Customer Experience	0.014	0.016	0.887	
Perceived Usefulness → Customer Experience	0.088	0.017	5.213*	
Anthropomorphism → Customer Experience	0.217	0.021	10.275*	
Emotions → Customer Experience	0.073	0.017	4.329*	
Social Presence → Customer Experience	0.252	0.022	11.689*	**0.869**
Customer Experience → Customer Satisfaction	0.888	0.072	12.259*	**0.742**

** Significant at 0.05 level*

Table 3: *Moderating effect of Customer Affective Commitment*

Dependent Variable: *Customer Satisfaction*	Standardized Coefficients	t	Sig.	R^2
Customer Experience	0.968	9.757	< 0.001	0.795
Customer Affective Commitment	0.664	8.763	< 0.001	
PE X CAC	-0.685	-4.574	< 0.001	