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Value Creation Behavior of Oura Ring Users in Social Media- (Customer-dominant LOGIC)

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Short Paper

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Abstract

Smart devices such as self-trackers are being used by an ever-increasing number of exercisers to self-monitor their health. Users' interactions in social media can co-create and co-destruct the value and has a substantial impact on services. To investigate Oura Ring users' value creation behavior in the online context, we focus on customer-dominant logic and customer-to-customer (C2C) interaction. This paper proposes a conceptual framework, one of the first to investigate value creation in an empirical study in the context of well-being. Oura Ring is a smart ring that enables users to track their activities and sleep quality. To test relationships, structural equation modeling and Fuzzy Set Qualitative Comparative Analysis (fcQCA) will be utilized. The proposed framework can help service providers figure out how to get involved and encourage C2C interactions. The study contributes to the body of knowledge by considering C2C interactions in the context of service encounters.

Keywords: Sleep tracker, social media, value co-creation, value co-destruction, customer-to-customer interaction.

Introduction

Customer-dominant logic (C-D logic) is a perspective that places the customer at the center rather than the service or the service provider (Heinonen et al. 2010). Thus, it is a different worldview, not a subset of a service-dominant logic that argues value is produced exclusively via interaction and collaboration between service providers and users (Vargo and Lusch 2008). This notion is distinct from conventional consumer-centered concepts. It focuses on what companies are doing to build consumer-oriented services rather than on what businesses typically provide user-friendly services. The distinction is subtle but crucial (Heinonen et al. 2010).

In other words, it is unfavorable for businesses to concentrate only on the relationship between service providers and consumers. They should analyze the company's involvement in the customer/user life. Thus,

it is vital for service providers to utilize C-D logic to acquire a better understanding of consumer experiences. As a result, consumer engagement is a critical component of co-creating value (Hsu 2017). Customers/users incomparable online communities communicate to share their experiences about products or services (Munzel and Kunz 2014) and acquire social acceptance (Nambisan and Baron 2009). Thus, such communities facilitate value co-creation (VCC) via user connections (Hsu 2017; Shen et al. 2020), and earlier research has shown that user contact in virtual forums such as social media is a prerequisite for VCC (Shen et al. 2020). However, interactions in virtual communities may be both beneficial and detrimental. Interaction does not always result in the co-creation of value (Dolan et al. 2019; Plé and Cáceres 2010). In this regard, online activities do not always lead to VCC (Dolan et al. 2019), and previous research has indicated that ineffective interaction can result in a decrease in well-being as members waste time, access insufficient information, and ultimately have diminished value perception (Järvi et al. 2018). Value co-destruction (VCD) is a term that explains this unsuccessful interaction process (Järvi et al. 2018). Thus, understanding VCD is just as crucial as understanding VCC (Plé and Cáceres 2010). The current study will fill gaps in the existing literature by examining the impact of both positive and negative consumer-to-customer (PC2C and NC2C) interactions on VCC and VCD outcomes, which will lead to users' health behavior change and perception of service quality. The following questions were addressed by the researchers: How do C2C interactions (positive and negative) impact social/ functional/hedonic benefits as VCC and VCD outcomes? How do such interactions shape users' perception of service quality and users' health behavior change? The researchers propose a conceptual framework that includes both co-creation and co-destruction of value to address the questions. The study reveals how the interaction of these forces can improve knowledge of consumer health behavior change and service assessments (Daunt and Harris 2017). In terms of health behavior change, our objective is to determine if the use of Oura Ring has resulted in any changes in the healthy habits of users over the past three months.

Development of the Theoretical Model

As seen in Figure 1, the conceptual framework is an integrated model that integrates three critical disciplines of information system research. The first two are focused on the pleasant and detrimental aspects of C2C interactions in online communities and their effect on VCC and VCD consequences. Another area investigates the influence of user engagement in social media on service quality views and health behavior changes. Pleasant and unpleasant interactions in internet communities are hypothesized to have an effect on the functional/social and hedonic advantages of wearable gadget users.

The objective of this study is to establish a clear distinction between VCC (positive) and VCD (negative). The current analysis is theoretically grounded on C-D logic. According to C-D logic theory, users/customers are critical to resource integration because they operate in embedded networks inside a service system. Additionally, VCC has been described as a resource exchange, with actors promoting resource exchange via their linkages (Lin et al. 2017). Consequently, PC2C and NC2C interactions are expected to result in beneficial (positive) and detrimental (negative) resource exchanges, respectively. Service, a significant component of value, may enhance as a consequence of pleasant engagement, as various actors have realized (Rosenbaum and Wong 2010).

Nonetheless, poor resource integration will obstruct service delivery. Additionally, according to a review of the research, C2C contact includes both satisfied and frustrated actions (Johnson et al., 2013). C2C interactions may have a variety of effects on users, including value perception (i.e. eliciting emotions of pleasure), social value perception (i.e. enhancing or diminishing a user's social position), and functional value perception (i.e. enabling or hindering making the decisions and resulting in resource benefits; Heinonen et al. 2018). We included the aforementioned wide range of value outcomes that consumers encounter as a consequence of C2C contact into the suggested integrated framework.

Furthermore, according to social exchange theory, individuals who put more energy into a task – such as co-creating customers – are encouraged by the benefits (Blau 2017). Customers expect distinct returns for co-creation of value. Customers who co-create in online communities expect enjoyable experiences (hedonic value); information about services and products (functional value); and interaction with other users (social value; Nambisan and Baron 2009).

Based on a review of the literature on online co-creation, customers expect first, intrinsically enjoyable tasks (cf. hedonic benefits), second, opportunities to gain experience (cf. functional benefits), and third, possibilities to connect with similar individuals (cf. social benefits; Füller 2010). We argue those improper interactions or unexpected behaviors can lead to unfavorable resource integration, leading to differences

between expected and actual states, and eventually VCD (Chowdhury et al. 2016) and a decline in value outcomes.
Indeed, a decline in perceived functional, social, and hedonic benefits reflects a decline in value perception. Thus, it is acceptable to assert that diminishing functional, social, and interpersonal advantages indicate a decrease in "well-being" in the interaction and value co-destruction.
In terms of user perception, conservation of resources theory postulates that people engage in coping techniques in order to reclaim their well-being after exposure to conditions that result in its loss (Laud et al. 2019; Smith 2013). Avoidance behaviors are another way of referring to reactive coping actions. Disengagement may manifest itself in the form of mental or behavioral avoidance (Laud et al. 2019; Smith 2013).
Thus, in virtual communities, users who experience a decline in well-being may have a negative perception of service quality and be unwilling to change their lifestyle to include ongoing physical activity or a balanced diet, both of which are necessary for staying healthy, a type of undesirable behavior; they may opt for alternative services or discontinue participation in the community in the future.
For the reasons mentioned above, this research will conduct an empirical examination of the mechanisms behind VCC and VCD. It examines the links between influencing components and the perceptions and behaviors of VCC and VCD participants in virtual community interaction. For this purpose, we developed an integrated model (cf. Figure 1) that incorporates this dyadic method into customer service evaluation and behavior change. The following section summarizes the proposed model, associated literature, and hypotheses.

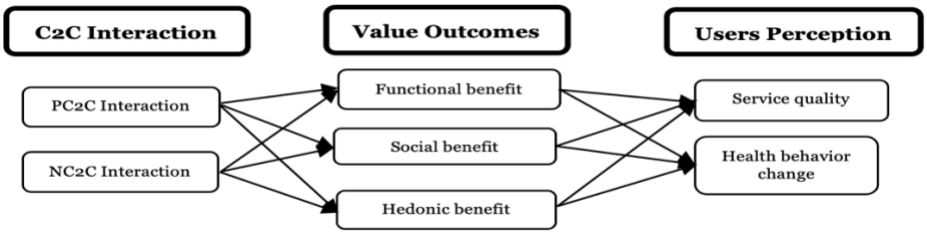

Figure 1 Research model

Hypothesis

Perceived Functional Benefit

The functional benefit of virtual groups in social media arises from the exchange of information and opinions (Nambisan and Baron 2009), which enables consumers to solve recognized issues (Bruhn et al. 2014) and obtain a feeling of authority (Brodie et al. 2013). This enables users to get additional functional advantages, such as skill and experience, from service providers and community members with whom they interact (Wang and Fesenmaier 2004). As an example, websites that offer accurate information, promptly respond to service-related concerns, and provide feedback may increase users' perceptions of functional benefits (Chen et al. 2019).
Users' perceived functional advantages decline when information is insufficient or has poor quality, which can cause value co-destruction (Järvi et al. 2018).
In conclusion, C2C interaction might have positive or negative value implications (Gruen et al. 2007). The functional value will be raised if the information gained from others in virtual communities enabled customers to seek, search, and use items or services in a way that best meets their standard requirements (cf. Harris and Baron 2004). In contrast, co-destruction of value in virtual groups is not unusual.

Unfavorable interaction behaviors in such groups, such as a lack of information or extreme interaction, hinder other participants' access to the highest information (Chang et al. 2020). As a result, the following two hypotheses are proposed by researchers:
H1a: Positive C2C interaction significantly influences perceived functional benefit.
H1b: Negative C2C interaction significantly influences perceived functional benefit.

Perceived Social Benefit

Users join online communities for a variety of reasons, one of which is to gain social advantages (i.e., to form and establish strong social interaction with other customers/users) (Luo et al. 2019a, b). The advantages individuals achieve from interpersonal activities, such as increasing their social interaction, sustaining and building interpersonal connections, and provoking kind behavior from other customers/users, are perceived interpersonal benefits (Zhou et al. 2014). Negative value perceptions are implied by decreases in perceived interpersonal advantages. As a result, losses in perceived interpersonal advantages could be seen as evidence of a decline in "well-being" in the encounter.
For instance, consumers involve in community creation, professional relationships (Gruen et al. 2007), and connections in positive interaction, which can lead to a feeling of belonging (e.g., Schau et al. 2009) and increased perceived social benefit. While, when users get comments from other members of the community about their products or services, customer innovation may be hampered by criticism, which has an adverse impact on customer satisfaction, implying that the social outcomes of C2C interaction might be unpleasant as well (Heinonen et al. 2018). Furthermore, user involvement can generate sentiments of displeasure or distress, which lower the consumer's perceived social value (Kim and Yi 2017). According to the above discussions, the following hypotheses are proposed:
H2a: Positive C2C interaction significantly influences perceived social benefit.
H2b: Negative C2C interaction significantly influences perceived social benefit.

Perceived Hedonic Benefit

Customers' hedonic activity is engendered by enjoyment interactions, experiences while using the service, and users' enjoyment (Georgi and Mink 2013). Conversations with other customers provide personal enjoyment and positive emotions (Bruhn et al. 2014), but they can cause worry as well (Johnson and Grier 2013) or negative emotions such as unhappiness (Grove and Fisk 1997).
C2C interconnection and the strength of interpersonal links improve enjoyment perception or social interactions among virtual reality service users (Lee et al. 2019). Users of amusement services such as online games engage with one another, which might enhance enjoyment. Negative behavior and engagement within the sport, on the other hand, contribute to emotions of anxiety, a decrease in positive values, and reduced feelings of capability, competence, and fun (Chen 2006). Thus, interaction has a major effect on perceived hedonic benefit (Choi and Kim 2004), and the following hypotheses are proposed according to the existing research literature (e.g., Ede et al. 2012) and the previous discussions:
H3a: Positive C2C interaction significantly influences perceived hedonic benefit.
H3b: Negative C2C interaction significantly influences perceived hedonic benefit.

Value Outcomes and Service Quality

An individual's overall experience of a service assessment or product is referred to as satisfaction (Oliver 1980). Individuals assess a product's or service's real functionality and compare it to what they expected. When actual performance exceeds expectations, a positive emotion (satisfaction) arises. Hence, user happiness is one of the factors that has been used to evaluate service.
According to a previous study, customers' perceptions of functional advantage enhance their satisfaction with the system (Marinao-Artigas and Barajas-Portas 2020). Consumers' perceived functional advantages had a favorable impact on satisfaction. When users' perception of functional advantages declines, so does their satisfaction, resulting in a rise in negative service quality perception (Akram et al. 2019).
Recent research has demonstrated that social benefit, as one of the dimensions of interpersonal benefit, is an influential element in service quality perception (Bilgili B et al. 2014). Thus, perceived social benefits

improve the satisfaction of users (Zhou et al. 2014). Nevertheless, if individuals' perceptions of social benefits diminish, dissatisfaction may occur. A decrease in contentment results in an increase in unpleasant feelings, which can cause a negative perception of value (Kim et al. 2016).
Customers' perceived enjoyment (hedonic benefit), as proposed in the literature on self-service systems (e.g., Mills and Morris 1986), is an essential mechanism for enhancing perceived service satisfaction or trust. Furthermore, there is a correlation between functional benefits and customer satisfaction, as well as a relationship between hedonic benefits and perceived service quality, in their study (Chitturi et al. 2008). As a result, good perceptions of interpersonal (social), hedonic, and functional benefits can lead to members' positive perceptions of service quality in online communities. As a result, the following three hypotheses are presented:
H4a. Perceived functional benefits significantly influence service quality.
H4b. Perceived hedonic benefits significantly influence service quality.
H4c. Perceived interpersonal benefits significantly influence service quality.

Value Outcomes and Health Behavior Change

Social media could be important mediators in the initiation, development, and sustaining of inactive lifestyles and lack of physical activity, which can lead to obesity and other health issues (Zhang et al. 2015). Some researchers have investigated how social networks can influence health behavior change (Williams et al. 2014), improvement of health level (Chou et al. 2013), and health communication (Moorhead et al. 2013), as well as how it can enhance physical activity, nutrition, and losing weight (Williams et al. 2014; Hunter et al. 2019).
A person's perception of psychological, cognitive, or practical support from other individuals might boost self-esteem and the acceptance of health practices in virtual forums (Gesell et al. 2012). Thus, friendships and other interactions (Smith and Christakis 2008), as well as information offered by others, encourage a change in individual dietary habits that may enhance health behavior and lead to improved health (Ory et al. 2010).
Social ties and satisfaction have been regarded as two main reasons for adults and children engaging in sport or (leisure) physical activity in terms of hedonic advantage (Haughton McNeill et al. 2006). In adults, social media interaction, enjoyment, and emotional support have been positively linked with intrinsically motivated for physical activity (Haughton McNeill et al. 2006) and, as a result, involvement in physical activity and walking, as well as having a healthy lifestyle (Allender et al. 2006). As a result, the following three hypotheses are presented:
H5a. Perceived functional benefits significantly influence health behavior change.
H5b. Perceived hedonic benefits significantly influence health behavior change.
H5c. Perceived interpersonal benefits significantly influence health behavior change.

Proposed Empirical Study and Methodology

In this study, we will use a quantitative technique (questionnaire) to investigate the hypothesized relationships. Participants are Oura Ring users from Finland in Facebook groups to discuss various subjects related to the Oura Ring.
The measuring items for the independent variables PC2C interaction (three items) and NC2C interaction (three items) were derived from (Huang and Hsu 2009; Reynolds and Harris 2009). Perceived social, functional, and the three-item scale borrowed from (Lin 2007; Wang and Fesenmaier 2004) was used to assess hedonic benefit. Each of the three measuring questions for perceived service quality and health behavior change was developed from (Bansal et al. 2005; Knowlden et al. 2017).
To analyze the data obtained in the quantitative method, we will use a Structural Equation Model (SEM)-partial least square (PLS) and Fuzzy Set Qualitative Comparative Analysis (fsQCA is a novel fascinating method that has huge potential, especially in the information system research). The results of the fsQCA method will complement those of the smart PLS.
fsQCA is a technique for overcoming the constraints of traditional statistical approaches. In contrast to the SEM results, which emphasize the significance of one-to-one path correlations, the fsQCA will disclose numerous conditions that lead to the conclusion.
In addition, the SEM is a variable-oriented technique that is focused on the independent variable's net influence on the dependent variable (Woodside 2013). The fsQCA, on the other hand, allows for

multifinality, in which identical conditions can lead to or contribute to different outcomes, as well as conjunctural causation, in which causal configurations of conditions can be either necessary or sufficient to achieve the outcome. In contrast, their constituent conditions may be neither necessary nor sufficient (Woodside 2013). By identifying all essential combinations of antecedents that result in an outcome, fsQCA improves and reinforces the PLS-SEM findings on an individual basis (Rasoolimanesh et al. 2021) and will generate supplementary and additional outputs.

The next step will be to perform an empirical investigation to validate the conceptual framework that has been presented. In this study, we will discover how Oura Ring users' positive and negative interactions in online community's influence value creation outcomes (social, hedonic, and functional benefit), as well as how PC2C and NC2C interactions shape user perceptions of service quality and health behavior change. The information would be gathered from users of the Finnish Oura Ring on social media sites like Facebook. The data will next be examined using the PLS and FsQCA software. As a suggestion for future studies, the user's prior experience can play a mediating role between C2C interaction and value outcomes (functional, social, and hedonic benefits) variables in the model. The mediating role of the user's prior experience could be examined by another research.

Expected contribution

In terms of the research contribution, this study overcomes the constraints of the current research lens by concentrating on online value exchanges between consumers rather than on online interactions between enterprises. This novel viewpoint (C-D logic) not only improves our knowledge of customer value exchanges but also broadens the scope of the literature on VCD. The bulk of research on VCD has been on interactions between firms or enterprises and their consumers (Smith 2013; Järvi et al. 2020). Few research has examined the effect of concurrent C2C value generation and destruction. Simultaneous, ongoing, and continuous co-destructive and co-creative activities are possible (Vartianen and Tuunanen 2016). Numerous requests for research, including VCC and VCD structures, have been made (Grönroos and Voima 2013; Plé and Cáceres 2010), and the present study will meet these calls.

In terms of contribution to practice, customer encounters are critical for value creation, as indicated in this study, and service providers should understand and acknowledge the two sides that coexist: VCC and VCD. As service designers strive to include consumers in co-creating growth strategies, they should try to minimize unfavorable interactions and increase perceived quality, resulting in brand loyalty and a healthy lifestyle (Kelley et al. 1990). Additionally, by expressing virtual community members' views and wishes, they assist service providers in not only improving their service quality and ability to innovate in response to user needs but also in optimizing the customer service experience, increasing customer satisfaction and feelings of accomplishment (Shen et al. 2020). It will also assist service providers in shifting their thinking to consider users in their own setting. Businesses will gain new insights into their involvement in their customers' lives if they understand the mechanisms of their customers' logic. In contrast to the preceding perspective, this suggests that, in addition to visible and regulated interactions, service providers should widen their horizons in order to get a deeper understanding of their users. This entails moving beyond co-creation to identifying interactions between consumers, corporations, and service systems.

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