

THE ROLE OF SERVICE-RELATED AND SOCIAL FACTORS IN DIGITAL SERVITIZATION

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Abstract

This research aims to understand the adoption of digital service platform usage intention and behaviour from the perspectives of technology adoption and collaborative consumption. It focuses on two main groups of indicators: service-related factors (cost, access convenience, usage convenience, complexity, perceived risk, enjoyment) and collaboration indicating social factors (sense of belonging, sharing behaviour, sense of sociability). It claims that these factors influence perception of utilitarian, hedonic and social value perceptions of digital service platforms so that positive value perceptions lead to behavioural intention and actual usage behaviour. It tests these relationships based on a structural equation model using a convenience sample data of 519 respondents.

Keywords service-related factors, collaborative social factors, digital service platforms

Track: Marketing and Technology Interaction

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1. Introduction

Even though our needs are the same, the way we satisfy them continues to evolve with the development of technology. At the same time, with increasing environmental concerns and increasing urban population, more sustainable business models have become common. Collaborative consumption as being one of the trends that have forced organizations to develop more sustainable options. It can be described as people working together to get something they need or want, either for a fee or some other form of compensation (Belk, 2014). Belk (2014) mentions that sharing and collaborative consumption practices have two common dimensions: 1) 'non-ownership usage' with temporary access consumer products and services models 2) dependence on the internet. That reveals the fact that collaborative consumption is different with consuming collaboratively in a conventional way. As Klarin and Suseno (2021) have defined, it is sharing the goods or services without transferring the ownership with the orchestration of online platforms. Another prominent definition of collaborative consumption is 'systems of organized bartering, lending, trading, gifting, and swapping' proposed by Botsman and Rogers (2010). This orientation is defined by Bardhi and Eckhardt (2021) as the 'access-based consumption'. Access-based consumption is described as transactions that can be mediated by the market but do not involve the transfer of ownership.

As these concepts take more place in recent works, researchers started to work on consumption motives. Similarly, in this study, we aim to understand which service related factors and social factors influence consumers value perception out of these type of services and how this may lead to usage intention and actual usage behaviours of digital service platforms that induce collaborative consumption.

2. Background of the Study

Digital platforms have significantly increased their importance and market value (Colby & Bell, 2016). Digital services enable people in various areas such as transportation, delivery, specialized services and so on. Hence it is imperative to understand what motivates individuals to adopt such services. There has been attempts to investigate different factors and their influence on digital service platforms usage behaviour. Delgosha and Hajiheydari (2020) have pointed out that special services (like guarantee, online customer service), superior functionality, flexibility and financial benefits are the reasons to adopt on demand service platforms. On the other hand, perceived complexity, security concerns, performance ambiguity, service provider trustworthiness and financial concerns are the reasons against the adoption of the service platforms. Fernandes and Oliviera (2021) have categorized the factors of the adoption of the digital voice assistants into three core elements: functional elements, social elements and relational elements. They have shown that perceived ease of use, perceived usefulness, perceived humanness, perceived social interactivity, perceived social presence, trust and rapport (personal connection between two parties) influence acceptance of such services. Alam et al. (2020) have investigated adoption of mHealth (mobile health) application by focusing on performance expectancy, social influence, facilitating conditions (like having the proper resources, knowledge, guidance, compatibility), perceived reliability, effort expectancy and price value. They have found significant relationships between these factors and behavioural intention and actual behaviour. Hsiao and Chen (2017) have found that perceived

content and price influenced value perception and hence the intention to pay for e-book subscription, and habit and environmental concern through positive attitude formation have led to paying intention for e-book subscription. Minami et al. (2021) have put forward bounded conception for sharing economy (SE) and collaborative consumption (CC) concepts. They have shown that sharing economy understanding moderated the relationships between behavioural intention and the intrinsic factors of enjoyment, social-community influence and environmental concerns and collaborative consumption approach moderated the relationships between behavioural intention extrinsic factors of economic evaluations, trend aspects and convenience.

All studies above mostly adopted Unified Theory of Acceptance and Use of Technology (UTAUT2) model (Venkatesh et al., 2012) that emphasises social influence in adopting new technologies but it does not specifically refer to collaborative consumption perspective. This study incorporates variables related to collaborative consumption and provides a comprehensive model that involve factors based on both approaches. Collaborative consumption is about sharing goods and services that is facilitated by digital services. It inherently suggests social interactions and sense of togetherness which goes beyond peer opinions, suggestions and social norms that is proposed by UTAUT2 model. In this study, it is argued that UTAUT2 model should be extended to include collaboration indicating factors.

Accordingly, we focus on two main group of indicators that are service related factors (cost, access convenience, usage convenience, complexity, perceived risk, enjoyment) and collaboration indicating social factors (sense of belonging, sharing behaviour, sense of sociability). Since value research depicts experience of products and services as one of the major determinants shaping consumer judgements for their future consumption decisions (Holbrook, 1999; Sheth et al., 1991; Zeithaml et al., 2020) and perception of value as driving choice behavior (Gallarza et al., 2011; Kumar & Reinartz, 2016; Swait & Sweeney, 2000), we argue that based on service-related and social factors, individuals perceive utilitarian, hedonic and social values out of new digital platforms that allow sharing and collaboration together and hence that leads to usage intention and behaviour. Accordingly, we test the following hypotheses (See Figure 1 and Table 1 for significant relationships):

- H1: There is a relationship between service related factors (cost, access convenience, usage convenience, complexity, perceived risk, enjoyment) and utilitarian, hedonic and social value perception of digital service platform.
- H2: There is a relationship between social factors (sense of belonging, sharing behaviour, sense of sociability) and utilitarian, hedonic and social value perception of digital service platform.
- H3: The higher the utilitarian, hedonic and social value perceptions of digital service platforms, the higher the digital service platform usage intention and hence actual usage behaviour.

3. Research Design

This is a quantitative study that gathered data through a cross-sectional survey conducted in Turkey. Data is collected using an online form service (i.e. Google Forms), since in Turkey there is a large technologically proficient population (Stanton & Rogelberg, 2001). The participants are reached based on convenience through social media and snowballing. The survey focused on companies that provide business-to-consumer (B2C) digital service platforms and people who had used at least one digital product, like an app or website on streaming movies, music or games, car sharing, accommodation/office sharing and so on. Turkey is one of the leading countries where such digital services are accepted quickly. For example, Turkey already has more than 3.5 million Netflix subscribers, making it the sixth-

largest subscriber base in Europe (Moody, 2021). Since the focus on digital services, smartphone ownership has been determined as a prerequisite for participation in the study.

Measures for the constructs in the model are adopted from the following studies: cost, sharing behaviour, social value (Barnes & Mattsson, 2017; Markle, 2013), usage convenience (Minami et al., 2021), access convenience (Colwell et al., 2008), complexity, enjoyment, perceived risk (Delgosha & Hajiheydari, 2020), sense of belonging (Ooi et al., 2018), sense of sociability (Małecka et al., 2022), utilitarian and hedonic value (Yuan et al., 2022), behavioural intention and actual usage behaviour (Alam et al., 2020). They are assessed on a 7-point Likert scale with anchoring points ranging from "strongly disagree" to "strongly agree". The data collected from 519 respondents is examined using by the steps of structural equation modelling (SEM).

4. Results

4.1. Sample characteristics

The sample of 519 respondents consists of 54.9% females. 47.2% of the respondents belong to the 20-34 age group and 41.6% of them are at the 35-55 age group. 53.4% of the respondents are married and 58.8% of them are employed. Lastly, 45% of the participants reported a household income more than 41000 TL per month. All demographic characteristics of the sample except age distribution, are in line with the characteristics of the population. This can be explained by the filtering question of smartphone ownership. Pew Research (2021) states that the frequency of smartphone usage declines by older ages.

4.2. Exploratory factor analysis

Prior to the implementation of the CFA, we utilized exploratory factor analysis (EFA). Subsequently, an examination of the theoretical model's specific components is carried out to examine the model's overall composition. Menon et al. (1996) propose that concentrating on fewer measurement models yields more reliable results when several constructs need to be assessed. Three groups of constructs are assessed accordingly: factors connected to services (cost, access convenience, complexity, enjoyment, perceived risk, use convenience), social elements (sense of belonging, sharing behaviour, and sociability) and perceived values (utilitarian, hedonistic and social value). All three EFAs demonstrate the expected factor structure with Kaiser-Meyer-Olkin (KMO) values being 0.912, 0.905 and 0.922 (above 0,70); all Bartlett's Test of Sphericity statistics being below 0.05 and with variance explained values of 86.69%, 90.65% and 89.18% respectively.

4.3. Confirmatory factor analysis (CFA) and SEM

The scales are validated by following the guidelines provided by Hair et al. (1998) by using Amos. The results confirm the factors above mentioned and all have high reliabilities ranging between 0.864 and 0.976 (all above 0.70; Nunnally & Bernstein, 1994). The ratio of the chi-square value to the degree of freedom was found to be below the predetermined threshold of 3 (CMIN/DF with a value 1.494). Additional goodness-of-fit statistics, such as the Normed Fit Index (NFI) with a value of 0.949, the Comparative Fit Index (CFI) with a value of 0.982, the Comparative Fit Index (CFI) with a value of 0.982, the Incremental Fit Index (IFI) with a value of 0.983, the Relative Fit Index (RFI) with a value of 0.942, and the Root Mean Square Error of Approximation (RMSEA) with a value of 0.031, collectively indicated that the theoretical model exhibited a reasonable fit level (Hair et al., 1998).

During the second phase of the investigation, the goodness-of-fit measurements are employed to evaluate the overall fit of the structural model. According to the findings of the

research, the proposed/base model demonstrates satisfactory overall fit indices. The Chi-square/df ratio is 1.585, indicating an acceptable fit. The Root Mean Square Error of Approximation (RMSEA) is 0.034, which is within an acceptable range. Additionally, the Normed Fit Index (NFI) is 0.945, the Comparative Fit Index (CFI) is 0.979, the Adjusted Goodness of Fit Index (AGFI) is 0.863, the Incremental Fit Index (IFI) is 0.979, and the Relative Fit Index (RFI) is 0.919.

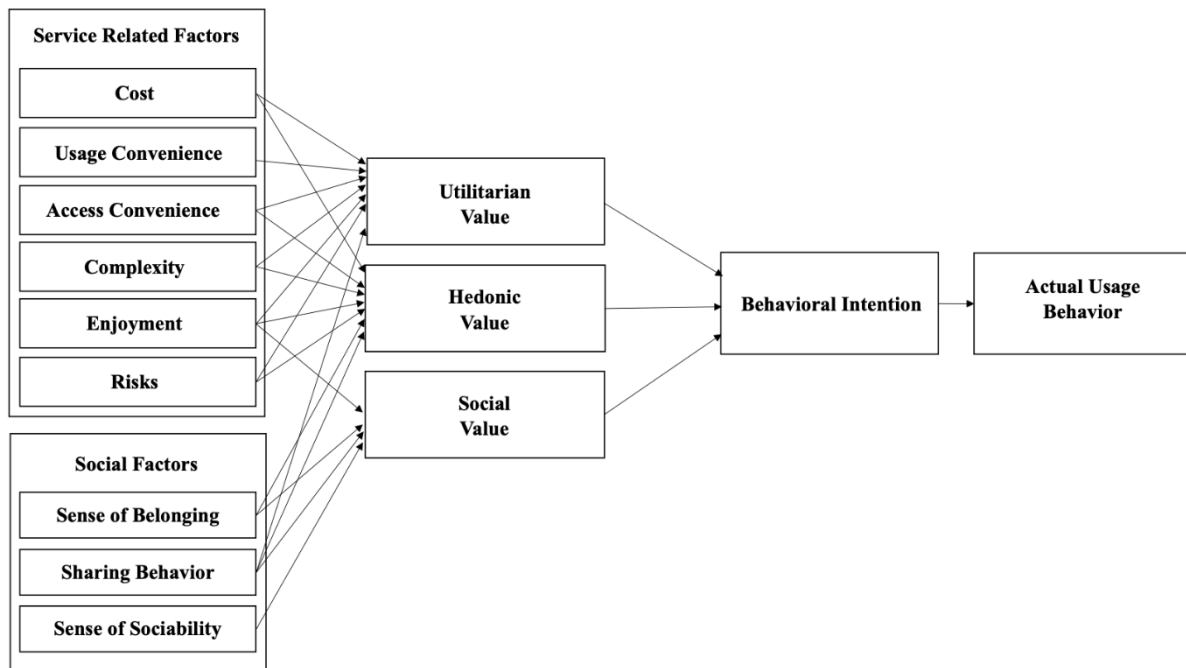


Figure 1. Alternative Model of the Study.

Overall model indicates that collaborative consumption service usage intention is affected by utilitarian value, hedonic value and social value and usage intention leads to actual usage behaviour. Utilitarian value is affected by cost, access convenience, usage convenience, complexity, enjoyment, risks and sharing behaviour factors. Hedonic value is influenced by cost, access convenience, complexity, enjoyment, risks, sense of belonging and sharing behaviour. Social value is impacted by enjoyment, sense of belonging, sharing behaviour and sense of sociability. All accepted relationships are illustrated in alternative model below (Figure 1) and the path statistics are given in Table 1.

Table 1. Path Coefficients and Hypothesis Testing Results of SEM.

Path			Std. Estimate	p	Hypothesis
ACT	<---	INTENT	0,727	***	Accepted
HEDON	<---	ACON	0,15	0,004	Accepted
HEDON	<---	BELONG	0,084	0,031	Accepted
HEDON	<---	COMPLEX	-0,239	***	Accepted
HEDON	<---	ECO	0,113	0,028	Accepted
HEDON	<---	ENJOY	0,12	0,011	Accepted
HEDON	<---	RISK	-0,087	0,026	Accepted
HEDON	<---	SHARING	0,138	0,033	Accepted
HEDON	<---	SOCIA	-0,005	0,929	Not Accepted

HEDON	<---	UCON	0,09	0,125	Not Accepted
INTENT	<---	HEDON	0,356	***	Accepted
INTENT	<---	SOCVAL	0,208	***	Accepted
INTENT	<---	UTIL	0,291	***	Accepted
SOCVAL	<---	ACON	-0,058	0,192	Not Accepted
SOCVAL	<---	BELONG	0,117	***	Accepted
SOCVAL	<---	COMPLEX	-0,025	0,509	Not Accepted
SOCVAL	<---	ECO	-0,006	0,897	Not Accepted
SOCVAL	<---	ENJOY	0,351	***	Accepted
SOCVAL	<---	RISK	-0,022	0,525	Not Accepted
SOCVAL	<---	SHARING	0,384	***	Accepted
SOCVAL	<---	SOCIA	0,198	***	Accepted
SOCVAL	<---	UCON	-0,023	0,66	Not Accepted
UTIL	<---	ACON	0,143	***	Accepted
UTIL	<---	BELONG	-0,007	0,807	Not Accepted
UTIL	<---	COMPLEX	-0,223	***	Accepted
UTIL	<---	ECO	0,224	***	Accepted
UTIL	<---	ENJOY	0,085	0,015	Accepted
UTIL	<---	RISK	-0,097	***	Accepted
UTIL	<---	SHARING	0,122	0,01	Accepted
UTIL	<---	SOCIA	0,023	0,593	Not Accepted
UTIL	<---	UCON	0,218	***	Accepted
ECO: Costs, UCON: Usage Convenience, ACON: Access Convenience, COMPLEX: Complexity, ENJOY: Enjoyment, RISK: Perceived Risk, BELONG: Sense of Belonging, SHARING: Sharing Behavior, SOCIA: Sense of Sociability, UTIL: Utilitarian Value, HEDON: Hedonic Value, SOCVAL: Social Value, INTENT: Usage Intention, ACT: Actual Usage Behavior					

5. Conclusion

In this study, based on Sharing Economy, Product Service System (PSS) and Technology Adoption Models in the literature, a model is tested that incorporates digital service related factors and social factors that may influence usage intention and hence actual usage behaviour if value is perceived by individuals. It especially focuses on digital services that integrate PSS and sharing economy understanding. The services referred in the survey are digital consumption platforms such as streaming services for movies, games or car rental platforms. These services are conceptualized as digital servitization of collaborative consumption, where product ownership is not completely transferred. The results of the study demonstrate which service related factors and social factors influence individuals hedonic, utilitarian and social value perceptions so that these may lead to usage intention and actual usage behaviour of these services.

In summary, it is found that digital service platforms usage intention is influenced by utilitarian value, hedonic value and social values so that intention leads to actual usage behaviour. Services-related factors of cost, access convenience, usage convenience, complexity, enjoyment, risks and one of the social factors of sharing behaviour affect utilitarian value. Hedonic value is associated with cost, access convenience, complexity, enjoyment, risks, sense of belonging and sharing behaviour. Social value is influenced by sense of belonging, sharing behaviour and sense of sociability and only one of the service-related factors of enjoyment.

This study sheds light on the adoption behaviour of collaborative digital services. The model presented in this study includes a review of service-related factors and social factors that have an impact on the utilitarian value, hedonic value, and social value of the collaborative digital services. It shows the link between value determinants and digital service usage intention and hence actual usage behaviour. This study enables the derivation of conclusions regarding the consumption behaviours of persons who engage in collaborative digital services and utilize associated apps. The development of digitization has significantly facilitated our ability to obtain products, exceeding previous levels of convenience. As a result, it shifts the habits of ownership behaviour in favour of access-based consumption. Such consumption practice is not only related to service features but also linked to collaboration indicating social factors of sense of belonging, sharing behaviour and sense of sociability. Accordingly, we argue that UTAUT2 model by Venkatesh et al. (2012) should be extended to include these factors too.

This study's two primary research limitations are convenience sampling and the process of translation regarding the measures used. Although we have implemented a preliminary stage for resolving local comprehension issues in translation, it is possible that some loss of meaning may still occur. Finally, this study focuses mainly on consumer services. The field of enterprise services should also be covered in future studies in order to expand this study to all digital services.

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