

TÜKETİCİ DAVRANIŞLARI ALANINDA İKİLİ SİSTEM TEORİSİ KULLANILARAK YAPILMIŞ ÇALIŞMALARIN VE ARAŞTIRMA MODELLERİNİN İNCELENMESİ

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ÖZET

Bu araştırmada tüketici davranışları alanında yeni kullanılmaya başlanan İkili Sistem Teorisine yönelik güncel araştırma modelleri incelenmektedir. Araştırma kapsamında ulaşılan çalışmalar değerlendirilmiş olup bunların içerikleri, sonuçları ve modelleri paylaşılmıştır. Türkçe tüketici davranışları literatüründe henüz İkili Sistem Teorisi çerçevesi kullanılarak yazılmış bir araştırma makalesine rastlanamamıştır. Dolayısıyla bu çalışmanın çıktılarının İkili Sistem Teorisine başvuracak pazarlama teorisyenlerine faydalı olacağı değerlendirilmektedir.

Anahtar Kelimeler: Tüketici Davranışı, İkili Sistem Teorisi, Araştırma Modeli.

INVESTIGATION OF RESEARCH MODELS OF STUDIES APPLIED THE DUAL-SYSTEMS THEORY IN THE FIELD OF CONSUMER BEHAVIOR

ABSTRACT

This study examines research models of the dual system theory, which has recently begun to be used in consumer behavior. The studies reached within the scope of the research were evaluated, and their contents, results, and models were shared. Unfortunately, a research article written using the framework of dual systems theory could not be found in the Turkish consumer behavior literature. Therefore, the outputs of this study could be helpful to marketing theorists who will apply to the dual system theory.

Key words: Consumer Behavior, Dual-Systems Theory, Research Model.

INTRODUCTION

People take many different roles as consumers, managers, employees, parents, etc., in their daily lives. Each role requires different critical and complex decisions due to its dynamics. Dual System Theory provides a reasonable basis for making these decisions theoretically meaningful. Therefore, the interaction between these two systems is frequently used in the literature to explain the judgments and preferences of individuals (Evans, 2008; Kahneman, 2003).

According to the Dual System Theory, one of the systems is purposive and rational, and the other is autonomous and emotional (Hamilton et al., 1999). These two systems maintain their existence together and play an active role in the decision-making processes of individuals in daily life (Epstein & Pacini, 1999). In the literature, these two systems are named differently as reflexive and reflective (Lieberman, 2002), experiential and rational (Epstein, 1994), System-1 and System-2 (Kahneman, 2003). In this study, it was preferred to use the reflexive and reflective systems.

The Dual System Theory has recently started finding a place for itself in consumer behavior. However, in the literature review, it is understood that few studies have been conducted using the Dual System Theory in consumer behavior. Those studies were mainly carried out on problematic consumer behaviors such as addiction.

Within the scope of the study, studies using the Dual System Theory in the field of consumer behavior were examined, and the findings of these studies were shared. In addition, the related studies' research models were also shared. It was aimed to convey how the hypotheses of the studies conducted using the Dual System Theory were designed. It is considered that this study will be a valuable resource for future research in the field of consumer behavior using Dual System Theory.

2. LITERATURE REVIEW

1.1. Dual-Systems Theory

Dual System Theory was applied to the service received from health institutions (Rolland et al., 2013), individual investors' attitudes towards risk (Fehr & Hari, 2014), smartphone use addiction (Soror et al., 2015), the level of employees' acceptance of the information processing system (Bhattacharjee & Sanford, 2006) and social media addiction (Turel & Qahri-Saremi, 2016) and in the literature. It is understood that the theory is one of the fundamental approaches that can be applied in technology-related research.

According to the Dual System Theory, two systems, known as reflective and reflexive direct the human decision-making process (Lieberman, 2007; Turel & Qahri-Saremi, 2016). The reflexive system employs cognitive processing and sensory relationships and thus transforms them into an immediate behavioral response. The reflective system, on the other hand, “processes information based on rules that provide control over actions” (Soror et al., 2015). The reflexive system has quick, impulsive, automatic, and unconscious traits. Conversely, the reflective system's traits include slowness, control, deliberateness, and analyticalness. According to the Dual System Theory;

- The reflexive system is autonomous, high-capacity, fast, impulsive, and animal cognition-like. It is not rational, and it enables the individual to perceive his environment and recognize objects. It is a genetically acquired hardware structure.
- On the other hand, the Reflective System is a controlled, limited, slow, rigid, and more human structure. For problems that cannot be solved with System-1, the individual applies to System-2 (Evans, 2008; Evans & Stanovich, 2013; Kahneman, 2017).

Dual Systems Theory is generally concerned with the determinants of these two systems on human behavior (Strack & Deutsch, 2004). Accordingly, behaviors can be done reflexively, spontaneously, effortlessly; or reflectively, consciously, and systematically. These two structures work interactively, not independently of each other, while determining the behaviors. Therefore, it would be appropriate to say that these two structures

primarily work consonantly. However, a conflict between these two systems affects the behavior of the individual (Hofmann et al., 2009; Soror et al., 2015). In other words, the reflective system seeks to assess how well the decisions to do the action match the person's long-term intentions, when the reflexive system provides an inclination to show or avoid a behavior. The individual decides to show or not the behavior as an outcome of the interaction between these two systems (Starck & Deutsch, 2004).

In the literature, there are studies about these two structures based on self-control with autonomous-sensory responses (Frieze & Hofmann, 2009; Turel & Qahri-Saremi, 2016), auto control with bad habits (Soror et al., 2015), systematic processing with exploratory processing (Chaiken, 1980; Zhang et al., 2014), and automatic gender role intimidation behavior (Devine, 1989).

On the other hand, the literature review shows that the Dual System Theory framework is frequently used in research on addiction (Caudwell et al., 2014; Babajide & Turel, 2018; Borooun et al., 2019; Ning et al., 2021; Mylonopoulos & Theoharakis, 2021).

2. METHOD

The research population is the research conducted with the Dual System Theory in the field of consumer behavior found on the Google Scholar search engine. In this context, the data were obtained from the research obtained as a result of searching ["dual system theory" "consumer behavior"] on the Google Scholar search engine between 01.03.2022 and 01.05.2022. It should be noted that the search was also conducted in Turkish. However, no research that could be included in the scope of this research was found.

The obtained studies were systematically examined and summarized, their models and outputs were conveyed, and a general model for consumer behavior research was tried to be put forward from the intersection set of these studies.

3. FINDINGS

As a result of the data analysis, the models obtained from the seven studies that can be the subject of this research and the content of the studies in which these models are used are shared in this section.

3.1. Musical Consumption, Self-Control, and Smartphone Addiction

Ning et al. (2021) examined the concepts of "Musical Consumption, Self-Control, and Smartphone Addiction" within the framework of Dual System Theory. They found that "*musical emotion and self-control variables were influential on smartphone addiction*" (Ning et al., 2021). As a result, music consumption with smartphones might also have unfavorable effects like smartphone addiction. For this reason, practitioners design music applications that consumers can use on their smartphones, and these applications can suggest different music according to the tastes of the users. This situation can also affect addiction (Ning et al., 2021). The research model used by the researchers is shown in Figure 1.

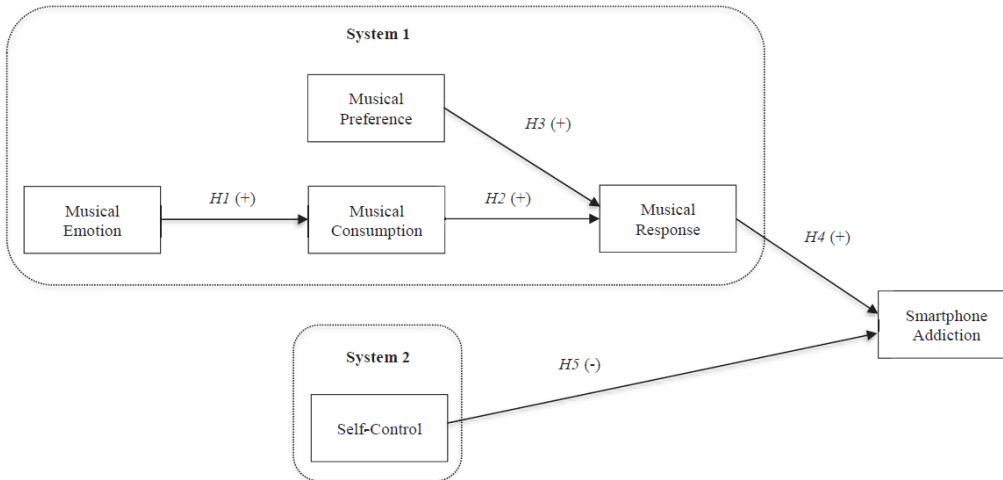


Figure 1 Musical Consumption, Self-Control, and Smartphone Addiction, Source: Ning et al., 2021.

3.2. The Effect of Communication in Social Networks on Consumers' Impulsive Buying Behavior

Xu et al. (2020) have concluded that the interaction between users in social network systems can lead consumers to buy impulsively in their study, which deals with online impulsive buying behavior within the framework of the Dual System Theory. Furthermore, research findings indicate that these interactions increase the level of ease of use perceived by consumers and thus increase the probability of purchasing. The study examined the process of taking action the individual through the Stimulus-Organism-Response (SOR) model. The research model is shared in Figure 2.

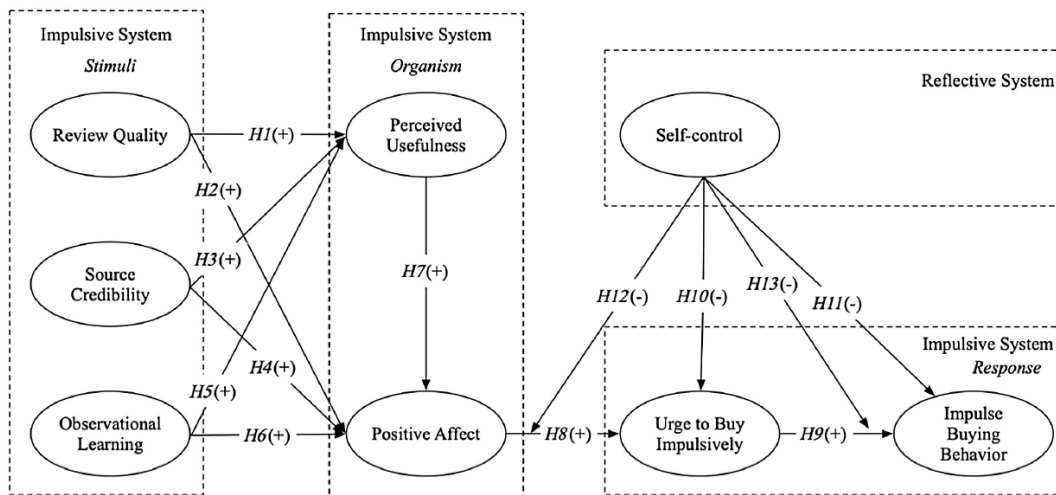


Figure 2 Impulsive Buying Behavior in Social Networks, Source: Xu et al., 2020.

According to the research hypothesis, the reflexive system generates an automatic and unconscious impulse for the individual to behave, while the reflective system produces rules for rational decisions. Furthermore, this process only becomes an inhibitory mechanism after activating the impulsive system. These assumptions are based on the studies of Evans (2008) and Strack and Deutsch (2004) (Cited by: Xu et al., 2020). Therefore, it

can be said that there is a chronological flow in the introduction of the two systems and determining the individual's behavior.

3.3. Consumers' Swearing Behaviors in Social Media

Turel and Qahri Saremi (2018) examined consumers' impulsive use and abusive speech behaviors in social networks in their study. The research emphasizes that abusive speech behavior in social networks causes a negative user experience for the individual and other users. As a result of the research, it was revealed that both behaviors emerged as a result of cognitive-emotional concerns and could be stopped with a cognitive-behavioral control mechanism.

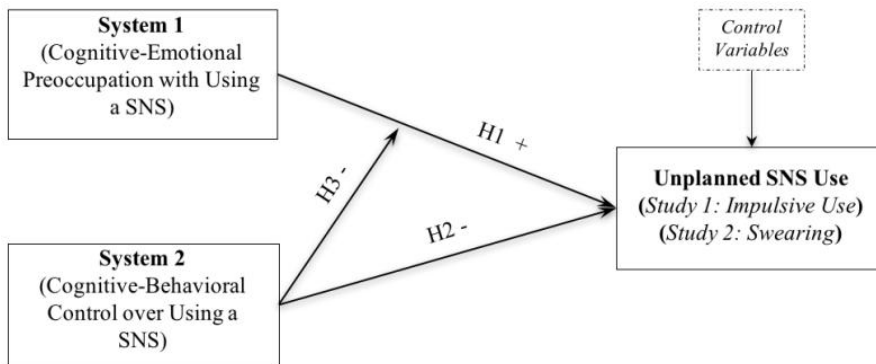


Figure 3 Impulsive Uses and Cursing Behavior in Social Networks, Source: Turel and Qahri-Saremi, 2018

As it can be understood from the research model, it is considered that System-1 produces impulsive actions and anxieties. Moreover, if the cognitive system in System-2 is weak, the individual may be insufficient to prevent this type of behavior. Finally, according to the research results, it is claimed that unplanned online behaviors can be explained by the Dual System Theory (Turel & Qahari-Saremi, 2018).

3.4. Examining Consumers' Facebook Addiction

The number of studies that try to explain the use of technology and the negative results experienced by individuals due to the conflict between reflexive learned habits and reflective self-control with Dual System Theory is increasing daily (Osatuyi & Turel, 2018; Soror et al., 2015).

Mylonopoulos and Theoharakis (2021) tried to reveal outputs related to Facebook addiction with a questionnaire they adapted by combining different scales in their research. There are six components in the model and sample questions about these components and each component are given below;

- *“For self-control: I am good at resisting the temptation to use Facebook.*
- *For harmonious passion: Facebook allows me to have many different experiences.*
- *For obsessive passion: My instinct is so strong that I cannot stop using Facebook.*
- *For habit: Checking Facebook has become a habit for me.*
- *For use: How many hours per day do you spend on Facebook on average?*

- For addiction-like symptoms: Sometimes, my social life is damaged because I spend too much time on Facebook” (Mylonopoulos & Theoharakis, 2021).

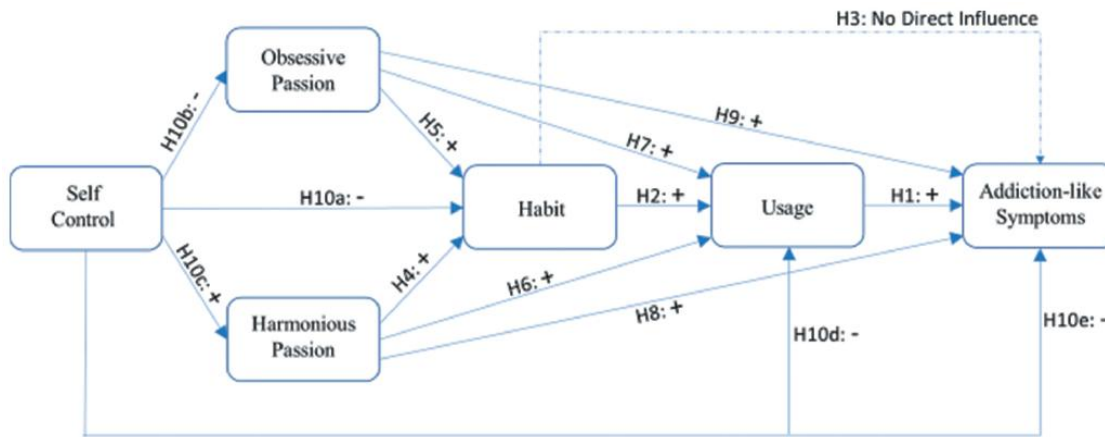


Figure 4 Facebook Addiction and Self-control, Source: Mylonopoulos and Theoharakis, 2021.

According to the research findings, “*obsessive passion*” directly affects “*addiction-like symptoms*.” On the other hand, self-control emerges as a mechanism that restrains the individual's obsessive and adaptive Facebook passion. In addition, as the time spent on Facebook increases, the behavior becomes a learned habit, reinforced by harmonious and obsessive passion (Mylonopoulos & Theoharakis, 2021).

3.5. The Effect of Online Reviews on Touristic Purchase Decisions

Consumer reviews in online media play a critical role in consumer decision processes today. Xu et al. (2021) examined the effect of online reviews on consumers' touristic purchasing decisions.

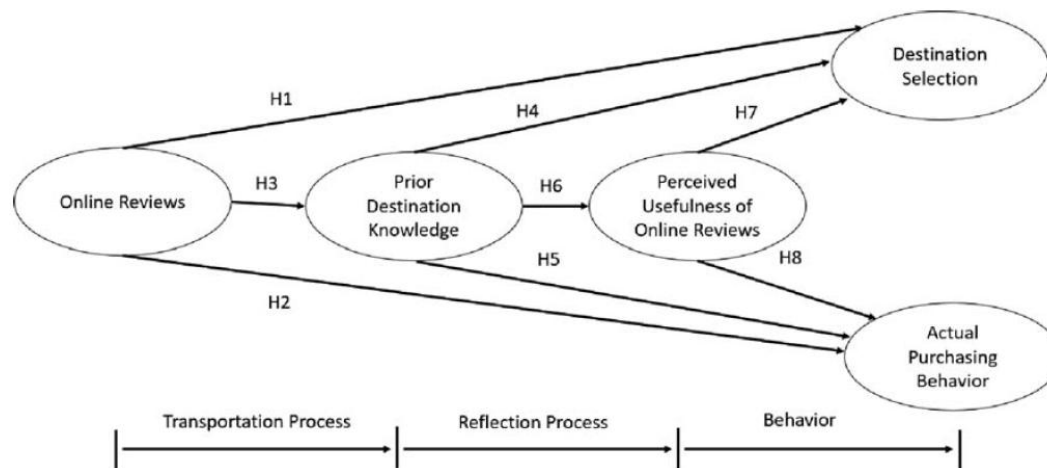


Figure 5 Effect of Online Reviews on Touristic Purchase Decisions, Source: Xu et al., 2021.

According to the research results, consumers adopt an analytical approach while making their destination choices and touristic purchasing decisions. Furthermore, consumers examine this information about touristic goods and services shared online, infer its accuracy and quality, and evaluate accordingly (Xu et al., 2021).

3.6. Consumers' Social Media Addiction

Babajide and Turel (2018) examined the interactions of social self-regulation (reflective system) and habit (reflexive system) variables on social media use and addiction in their research on social media addiction.

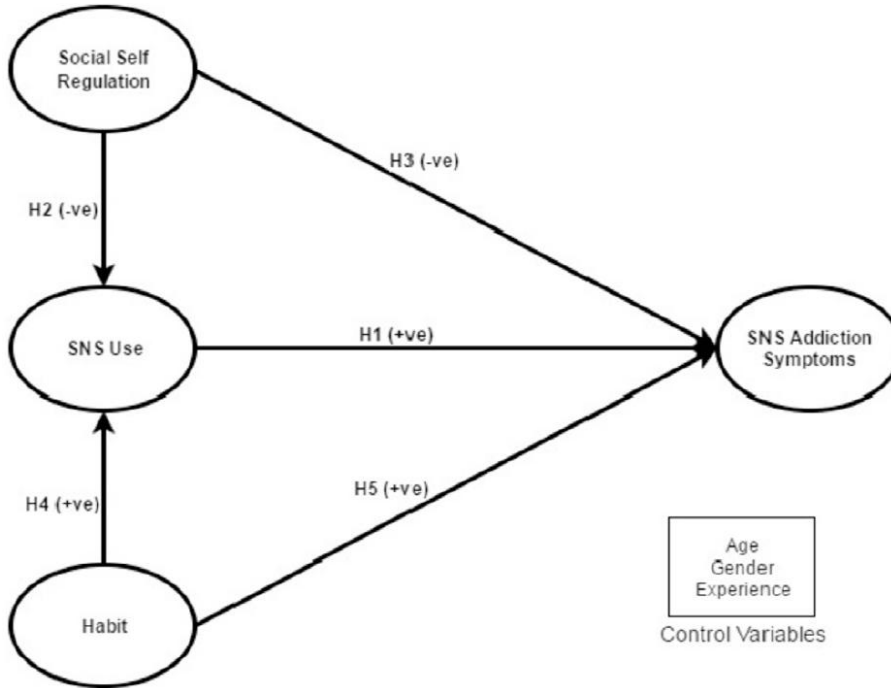


Figure 6 Consumers' Social Media Use Addiction-1, Source: Babajide and Turel, 2018.

As a result of the research, it was seen that the reflective system has a regulatory effect that suppresses individuals' social media addiction behavior (Babajide & Turel, 2018).

Boron et al. (2019), like Babajide and Turel (2018), tried to model consumers' social media use addiction through the Dual System Theory.

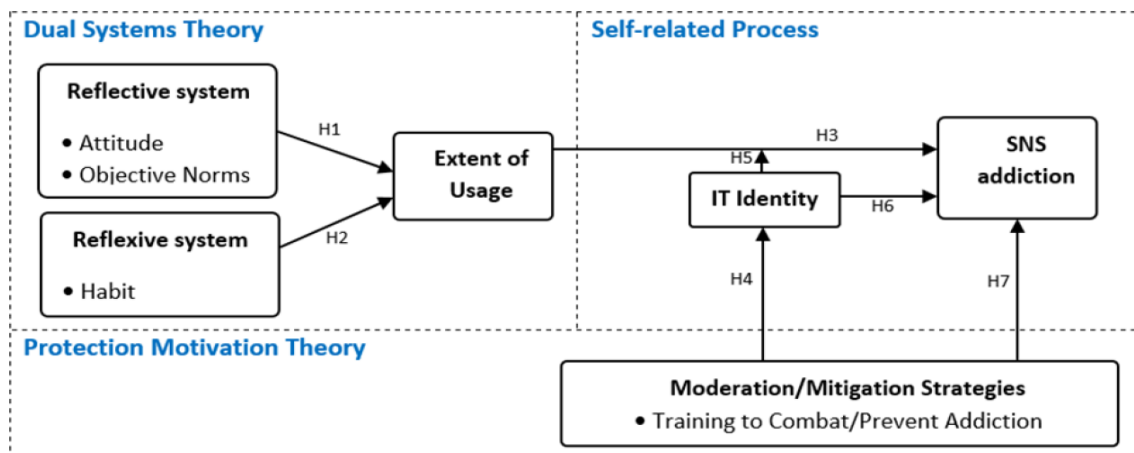


Figure 7 Consumers' Social Media Use Addiction-2, Source: Boroon et al., 2019.

The model generally consists of three parts. These are:

- I. The first structure consists of reflective and reflexive systems within the framework of Dual System Theory,
- ii. The second structure, which defines the educational process within the framework of conservation motivation theory,
- iii. The third structure is defined as the individual process and defines the dependent variables (Boroon et al., 2019).

It should be noted that this research was designed as a model proposal, but the model was not tested.

3.7. Problematic Alcohol Consumption

The Dual System Theory is also used for research on problematic alcohol consumption. For example, Caudwell et al. (2014) benefited from this theory in their research on the pre-alcohol consumption behavior of university students. In addition, different measurement tools, such as the Young Adult Alcohol Problems Brief Scale and the Alcohol Identity Indirect Association test were also used in the study.

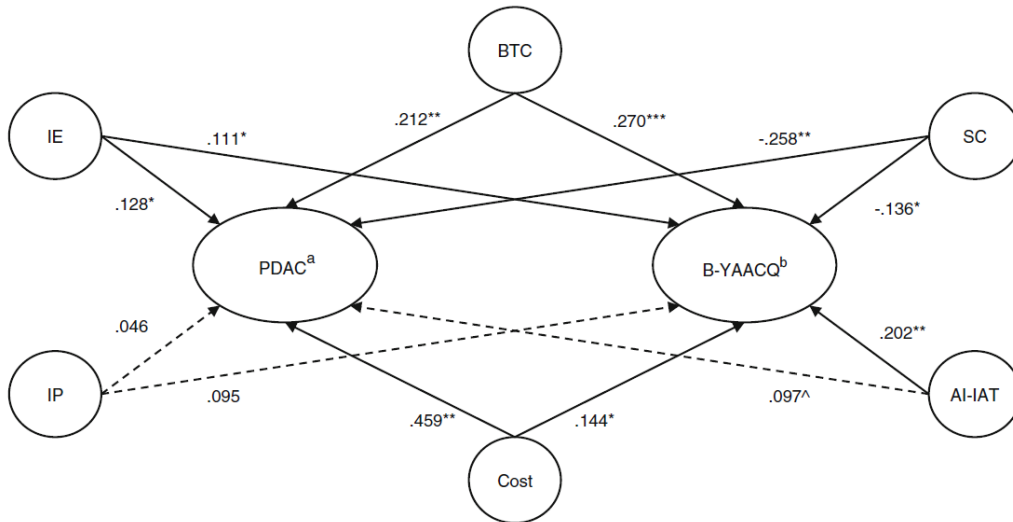


Figure 8 Problematic Alcohol Consumption, Source: Caudwell et al., 2014.

Abbreviations in the model:

- “SC = situational control
- BTC = barriers to consumption;
- AI-IAT = alcohol identity implicit association test;
- PDAC = typical pre-drinking alcohol consumption;
- B-YAACQ = brief young adult alcohol consequences scale” (Caudwell et al., 2014).

The most striking output of the research is that students see alcohol consumption as a part of the activities they participate in for socializing, and it is determined that they start alcohol consumption at home before going to

the event to save costs (Caudwell et al., 2014). Therefore, this type of behavior was named pre-alcohol consumption in the research.

DISCUSSION AND CONCLUSION

When the models of the studies that can be reached as a result of the research are examined, it is seen that the majority of them are related to irrational, impulsive consumption behaviors and consumption addictions. Here, it is seen that the primary purpose is to determine the balancing role of the reflective system in the irrational reflexive system leading the individual to erroneous consumption behavior.

When the research models are examined, it is seen that the reflective and reflexive systems of the dual system theory are used as independent variables. Notably, the factors chosen as dependent variables in these studies are generally determined within the framework of addiction and negative and problematic consumption behaviors.

As a result of the examination, it is seen that the reflective and reflexive systems are taken as independent variables. The studies obtained from Google Scholar for this research investigate their effect on the independent variables. In this context, it can be said that the models designed for the dual system theory and consumer behavior are generally built based on Figure 9.

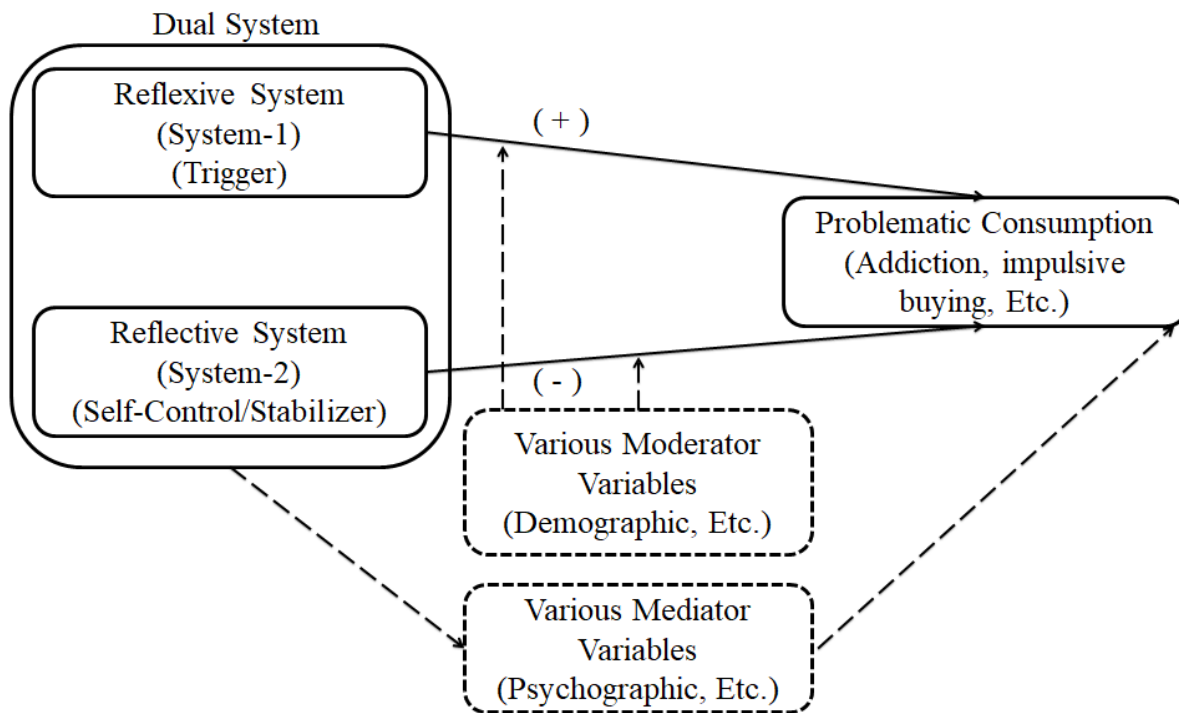


Figure 9 The Model Proposal: Using Dual Systems Theory in Consumer Behavior

It is understood that demographic variables can be included in the model as moderators in the model's design, and various variables can be used as mediating variables according to the scope of the research.

In future studies, it is considered that it would be beneficial to apply the Dual System Theory for impulsive, compulsive, and pretentious buying behaviors.

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