EXPLORATION OF PRACTITIONERS' CONTINUANCE INTENTION TOWARD AGILE METHODOLOGY USAGE: AN EMPIRICAL INVESTIGATION

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ABSTRACT

EXPLORATION OF PRACTITIONERS' CONTINUANCE INTENTION TOWARD AGILE METHODOLOGY USAGE: AN EMPIRICAL INVESTIGATION

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Organizations have embraced Agile methodology due to its flexible approach to software development compared to traditional methodologies. As Agile practices become widespread, it is crucial to understand the factors influencing practitioners' intentions to continue using Agile methodology. However, little attention is given to investigating Agile methodology continuance intention in the literature. The present study aims to identify the factors influencing practitioners' continuance intention toward Agile methodology usage. In order to specify the factors, a systematic literature review was performed and expert opinions were taken. The study also examines the influence of identified factors on the continuance intention of Agile methodology and proposes a model extending the Expectation Confirmation Model in the context of Agile methodology. The proposed model was validated with data collected from 97 Agile practitioners working at different organizations in Türkiye through an online questionnaire. After data collection, the model was verified with the reliability tests, Exploratory Factor Analysis, Confirmatory Factor Analysis, and Structural Equation Modeling. By utilizing Structural Equation Modeling, the influencing factors and the relationships among these factors were analyzed and the final model is proposed. Finally, the study's findings were evaluated, compared, and contrasted with the existing literature.

Keywords: Continuance Intention, Agile Methodology, Expectation Confirmation Model, Agile Methodology Continuance Intention

ÖZ

UYGULAYICILARIN ÇEVİK METODOLOJİ KULLANIMINI SÜRDÜRME NİYETİNİN ARAŞTIRILMASI: AMPİRİK BİR İNCELEME

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Çevik metodoloji, geleneksel metodolojilere kıyasla yazılım geliştirmede sağladığı esneklik sayesinde organizasyonlar tarafından benimsenmektedir. Çevik uygulamaları yaygınlaştıkça, uygulayıcıların Çevik metodolojiyi kullanmaya devam etme niyetlerini etkileyen faktörleri anlamak kritik önem taşımaya başlamıştır. Ancak, literatürde uygulayıcıların Çevik metodoloji kullanımını sürdürme niyetinin incelenmesine yeterince önem gösterilmediği görülmüştür. Bu bağlamda, mevcut çalışma, uygulayıcıların Çevik metodolojiyi kullanmaya devam etme niyetlerini etkileyen faktörleri belirlemeyi amaçlamaktadır. Faktörleri belirlemek amacı ile, sistematik literatür taraması yapılmış ve uzman görüşleri alınmıştır. Çalışma ayrıca, belirlenen faktörlerin Çevik metodoloji kullanımını devam etme niyeti üzerindeki etkilerini incelemeyi ve Çevik metodoloji bağlamında Beklenti Doğrulama Modeli'ni genişleten bir model önermeyi hedeflemektedir. Önerilen modeli test etmek için Türkiye'deki farklı organizasyonlarda çalışan 97 Çevik metodoloji uygulayıcısından veriler çevrimiçi bir anket aracılığıyla toplanmıştır. Veri toplama işleminin ardından, model sırasıyla güvenilirlik testleri, Açımlayıcı Faktör Analizi, Doğrulayıcı Faktör Analizi ve Yapısal Eşitlik Modeli ile doğrulanmıştır. Yapısal Eşitlik Modeli kullanılarak, etkili faktörler ve bu faktörlerin aralarındaki ilişkiler analiz edilmiştir ve modelin son hali sunulmuştur. Son olarak, çalışmanın bulguları mevcut literatür kapsamında değerlendirilmiş, karşılaştırılmış ve karşıtlıklar ortaya konmuştur.

Anahtar Sözcükler: Sürdürme Niyeti, Çevik Metodoloji, Beklenti Doğrulama Modeli, Çevik Metodoloji Sürdürme Niyeti

To My Lovely Husband

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LIST OF ABBREVIATIONS

AT	Attitude
AVE	Average Variance Extracted
C	Confirmation
CFA	Confirmatory Factor Analysis
CI	Continuance Intention
CR	Composite Reliability
ECM	Expectation Confirmation Model
ECT	Expectation Confirmation Theory
EFA	Exploratory Factor Analysis
FC	Facilitating Conditions
HA	Habit
IS	Information Systems
KMO	Kaiser-Meyer-Olkin
PEOU	Perceived Ease of Use
PLS	Partial Least Square
PU	Perceived Usefulness
S	Satisfaction
SEM	Structural Equation Modeling
SLR	Systematic Literature Review
SPSS	Statistical Package for the Social Sciences
TAM	Technology Acceptance Model
TPB	Theory of Planned Behavior
TRA	Theory of Reasoned Action
UTAUT	Unified Theory of Acceptance and Use of Technology

CHAPTER 1

INTRODUCTION

As the software development processes continued to evolve and grow into fast-paced and collaborative projects, the usage of traditional methodologies started to decline. Agile methodology has risen to transform the project management landscape and redefine how teams understand, plan, and carry out projects. Agile methodology has been proven with its focus on continuous feedback loops, the collaboration between customers and development teams, and iterative development, and have become core processes in software development projects (Nerur et al., 2005).

As Agile practices become mainstream, understanding the factors influencing practitioners' continuance intention for Agile methodology usage becomes paramount. The scarcity of research regarding the Agile practitioners' continuance intention may imply that individuals are open to adopting any Agile methodology for their projects. However, this presumption may not be valid (Mamakou, 2023). Additionally, while numerous researchers have investigated the initial acceptance of Agile methodology, there is an ongoing need for a more profound understanding of Agile methodology usage after its adoption (Abrahamsson et al., 2009; Gregory et al., 2016; Mamakou, 2023; Senapathi & Srinivasan, 2013).

Continuance intention is defined by Bhattacherjee (2001) as "*an individual's intention to continue using an information system*" (p. 359), in one of the most influential studies for investigating users' continuance intention. In that study, building upon Expectation Confirmation Theory (ECT), the researcher suggests Expectation Confirmation Model (ECM), which gives insight into the complex interplay of factors shaping users' intention for IS continuance and highlights the importance of confirmation, perceived usefulness, and satisfaction as essential aspects.

Moreover, the IS Success Model was offered by DeLone & McLean (1992) and was adjusted by its authors in 2003, which expanded continuance intention literature by providing a broad framework to understand the factors that affect users' decisions to continue using information systems (Petter, DeLone & McLean, 2008; Zhou, 2013). By considering various aspects of IS success, the IS Success Model contributes to the

continuance intention literature by offering a more thorough understanding of the factors driving users' ongoing engagement with IS.

In addition, numerous research studies were performed to examine users' continuance intention in different settings such as *web/mobile apps* (Akdim et al., 2022; Alalwan, 2020; Filieri et al., 2021; Hsiao et al., 2016; Mouakket, 2015), *e-learning* (Cheng et al., 2015; Guo et al., 2016; Ifinedo, 2017; Joo et al., 2017; Lee, 2010; Roca et al., 2006; Roca & Gagné, 2008; Wu & Chen, 2017), *AI Chatbots* (Ashfaq et al., 2020; Li & Wang, 2023), *social networking* (Akdim et al., 2022; Hsiao et al., 2016; Mouakket, 2015), and *online banking* (Bhattacherjee, 2001). However, although there is an increasing need for a close examination of users' intention to continue using Agile methodology, there is still a significant lack of research on this context.

Following the previously discussed studies and ideas around continuance intention and Agile methodology, the present study aims to combine existing literature and propose a model in Agile methodology context for understanding practitioners' Agile methodology continuance intention.

1.1. Aim of the Study

The present study aims to identify the factors influencing practitioners' intention to continue Agile methodology usage. The study also seeks to examine the influence of identified factors on Agile methodology continuance intention and propose a model extending ECM in the Agile methodology context. Put differently, by aligning ECM with the unique characteristics of Agile methodology, the study aims to provide valuable insights into the factors that drive the continued usage of Agile methodology within organizations.

The present study aims to provide a continuance intention model in Agile methodology context for several reasons. Firstly, when the related literature was reviewed, some common constructs were found to be referred to in different studies working on continuance intention. However, these studies did not examine the Agile methodology continuance intention. Therefore, more recent studies from 2014 to 2023 were reviewed by the researcher to determine the factors that they focus on in the continuance intention context. By using these factors, the present study aims to provide an up-to-date model for understanding practitioners' continuance intention toward Agile methodology usage.

1.2. Significance of the Study

Agile methodology proved its worth and was widely adopted in the industry. Even though this shows that Agile methodology is mainstreamly used, it does not prove that everyone who adopted it would want to continue using it. This creates the inquiry of what affects the intention to continue using Agile methodology.

This thesis study reveals important implications for organizations employing Agile methodology. Displaying the factors affecting the continuance intention of Agile methodology usage offers excellent value for organizations and practitioners who use Agile methodology in their processes. First of all, the results of this research would help organizations that would like to understand what is essential for their employees' desire toward continued usage of Agile methodology. By understanding this, organizations can improve their processes, focus more on the impactful factors, and improve adaption and retention rates for Agile methodology strategies. Another significant result is that thanks to recognizing key drivers, organizations can develop customized training programs and support mechanisms that address the needs and concerns of Agile methodology practitioners. Lastly, by focusing on the factors that help with continuance intention, organizations can avoid the cost of changing to new methodologies.

1.3. Research Strategy

The present thesis study aims to address the following research question:

- What factors influence Agile practitioners' intention to continue using Agile methodology?

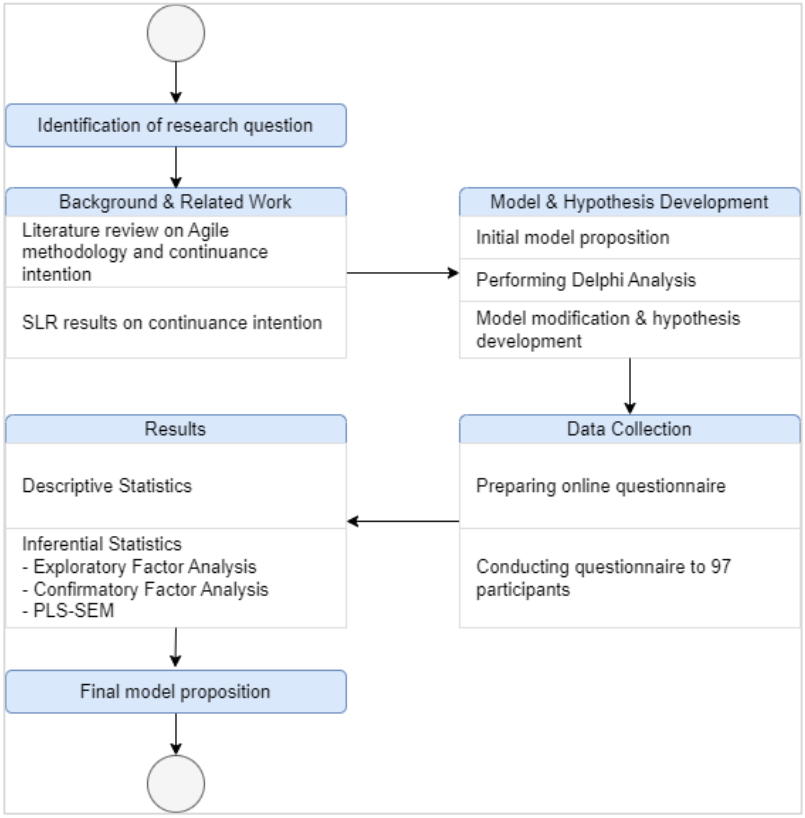

Figure 1: Steps of the Research Strategy

Figure 1 illustrates each step of the research strategy for the present thesis study.

In order to answer the research question of the thesis study, a literature review was first conducted on Agile methodology, continuance intention, theoretical models and frameworks, followed by an SLR on the factors influencing continuance intention.

Afterwards, an initial model was formed with the additional factors obtained from SLR. Following that, a Delphi Analysis was performed to determine the most appropriate factors among the identified additional ones and to ensure content validity. The initially proposed model was modified according to Delphi Analysis results and research hypotheses of the study were developed.

An online questionnaire was prepared as a data collection instrument, and it was conducted on 97 participants working at different organizations in Türkiye.

After collecting data, the data were analyzed with IBM SPSS Software and SmartPLS Program, and the results of demographics of the participants, descriptive statistics, reliability analysis, Exploratory Factor Analysis, Confirmatory Factor Analysis, and Structural Equation Modeling were presented. According to the results, the final version of the model was proposed.

1.4. Outline of the Thesis

Chapter 1 presents introductory information regarding the concepts of Agile methodology, continuance intention, and the increasing need for research on continuance intention toward Agile methodology. Then, the aim, significance, research strategy and organization of the present study are presented.

Chapter 2 provides background and related works regarding Agile methodology and continuance intention.

In Chapter 3, an overview of the model and hypothesis development processes are explained and an initial model is presented. After that, the process of implementing Delphi Analysis is discussed, the modified version of the initially proposed model is provided, and the research hypotheses of the study are presented.

In Chapter 4, the details of the research methodology such as study sample, research design, data collection instrument, data collection and analysis procedures, and the details of the study's external and internal validity are explained.

Chapter 5 presents the results of the data analysis.

In Chapter 6, the results of the proposed model are discussed based on the factors.

Finally, in Chapter 7, the inferences from the study are reported, implications for research and practice are provided, limitations of the study are discussed, and recommendations are made for further research studies.

CHAPTER 2

BACKGROUND AND RELATED WORK

This section synthesizes existing research, highlighting key themes, theoretical frameworks, and gaps in the existing literature regarding Agile methodology and continuance intention. This section is organized as follows:

- A review of existing literature on Agile methodology is provided.
- A literature review on the subject of continuance intention is presented.
- Theoretical models and frameworks related to continuance intention are explained.
- SLR results concerning factors influencing continuance intention are presented.

2.1. Agile Methodology

The emergence of Agile methodologies has brought fundamental changes to project development. Unlike traditional methodologies, Agile methodologies create an environment where collaboration, adaptability, and iterative improvements are priorities. Agile methodologies became visible in 2001 with "Manifesto for Agile Software Development" (Beck et al., 2001). The manifesto was suggested by seventeen specialists from various disciplines who formed the Agile Alliance, and it outlines four values, which are displayed in Table 1.

Table 1: Agile Values

Individuals and interactions	over	Processes and tools
Working software	over	Comprehensive documentation
Customer collaboration	over	Contract negotiation
Responding to change	over	Following a plan

Agile values are briefly explained as follows:

Individuals and interactions over processes and tools: This value highlights the significance of putting people and their communication first in a project rather than depending only on tools or processes. That is, Agile teams foster a culture of trust and cooperation by valuing open communication and teamwork.

Working software over comprehensive documentation: Regular delivery of functional software precedes extensive documentation in Agile methodologies. Although documentation is crucial, the main goal is to use functional software to produce actual value.

Customer collaboration over contract negotiation: Agile methodologies foster customer participation and collaboration. Put differently, Agile teams interact with the customers to acquire information about their needs, ask for feedback, and modify the product as necessary instead of rigorously following contracts or specifications that have already been established.

Responding to change over following a plan: Agile methodologies set an increased value on adaptability since they acknowledge that change is inevitable in software development. Instead of inflexibly following a set of plans, Agile teams embrace change as an opportunity to enhance the product and adapt to changing conditions and requirements.

These values are supported by twelve principles by Agile Alliance. The Agile principles are presented in Table 2 as follows:

Table 2: Agile Principles

No	**Principle**
1	Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2	Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3	Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4	Business people and developers must work together daily throughout the project.
5	Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
6	The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7	Working software is the primary measure of progress.
8	Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.

Table 2 (cont.)

9	Continuous attention to technical excellence and good design enhances agility.
10	Simplicity -- the art of maximizing the amount of work not done -- is essential.
11	The best architectures, requirements, and designs emerge from self-organizing teams.
12	At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

Using Agile methodologies requires to embracing and adhering Agile values and Agile principles in practice.

The most commonly used Agile methodologies include Extreme Programming (XP), Scrum, Kanban, Lean, Feature Driven Development (FDD). Among these, Scrum is the most widely adopted one (VersionOne, 2019). Each methodology emphasizes different principles, and there is no universal standard for implementing Agile features across these methodologies.

Consequently, considering the present difficulties of software development and traditional methodologies, Agile methodologies are widely acknowledged as engaging and feasible options for ensuring quality, managing unforeseen requirements, budget control, and regularly delivering high-quality products within a limited time and budget (Campanelli & Parreiras, 2015). Correspondingly, Agile methodologies have the potential to enhance efficiency, adaptability, and alignment in organizations (Tam et al., 2020). According to a study conducted by Cockburn and Highsmith (2001) on nearly 200 people from around the world, compared to other methodologies, using Agile methodologies showed better results in terms of customer satisfaction, performance, quality, and team morale.

Despite the growing need, there are significantly fewer studies on the post-adoption usage of Agile methodologies. According to Senapathi and Srinivasan (2012), although previous research has enhanced the understanding of organizations' adoption of Agile methodology, there is still limited knowledge regarding their usage within organizations after its adoption. In this respect, the researchers performed a systematic review to identify factors for continued usage of Agile methodologies. As organizations move beyond adoption and Agile methodology become established, diverse interpretations and implementations arise due to specific needs and human nature (Abrahamsson et al., 2009). Therefore, the close examination of Agile methodology continuance has become essential.

2.2. Continuance Intention

Understanding the users' continuance intention is crucial for promoting long-term commitment in every aspect of technological development. It is a reliable predictor of future actions, indicating whether individuals are likely to persist in engaging with a product or service. In that regard, the Expectation Confirmation Theory (ECT) developed

by Oliver (1980) is widely used to study post-purchase intention. The predictive nature of this theory has been proven across various contexts related to continuance (Oliver, 1993).

Building upon ECT, Bhattacherjee (2001) proposed the Expectation Confirmation Model (ECM), which is a milestone for most of the research studies on continuance intention and defined *continuance intention* as *"an individual's intention to continue using an information system"* (Bhattacherjee, 2001, p.359). This study aimed to examine the intention of users to continue IS usage, concentrating on satisfaction, perceived usefulness, and confirmation. According to this model, the users' intention to continue using the IS was influenced by their satisfaction with its usage and the perceived usefulness of ongoing IS use.

Bhattacherjee (2001) defined *satisfaction* as *"users' feelings about prior IS use"* (p.359) and found that satisfaction with IS use is the strongest predictor of users' continuance intention. The researcher stated that users exhibiting higher satisfaction levels are more likely to express a strong intention to continue using IS. In parallel with Bhattacherjee (2001), a substantial body of research investigated the role of satisfaction in the continuance intention context (Ashfaq et al., 2020; Cho, 2016; Hsiao et al., 2016; Joo et al., 2017; Thong et al., 2006).

Furthermore, Bhattacherjee (2001) defined *perceived usefulness* as *"users' perception of the expected benefits of IS use"* (p.359) and pointed out that users' intention to continue using the IS was influenced by the perceived usefulness of its ongoing use. Correspondingly, many research studies (Ashfaq et al., 2020; Cho, 2016; Hsiao et al., 2016; Joo et al., 2017; Roca & Gagné, 2008; Thong et al., 2006; Wu & Chen, 2017) investigated the perceived usefulness to examine the users' continuance intention in different IS contexts.

Thong and colleagues (2006) carried out a study investigating the continuance intention of mobile internet service users. In this study, in addition to satisfaction, perceived usefulness, and confirmation, they expanded ECM by involving the factors of perceived ease of use and perceived enjoyment. The researchers found that satisfaction, perceived usefulness, perceived ease of use, and perceived enjoyment significantly affect users' intention to continue IT usage. Additionally, the researchers found that the level of confirmation and post-adoption beliefs determines the user's satisfaction (Thong et al., 2006).

In parallel with the findings of Thong and colleagues (2006), *perceived ease of use* was found to have a positive effect on users' continuance intention in the study conducted by Ashfaq and colleagues (2020). More specifically, the researchers conducted a study to investigate users' continuance intention toward AI Chatbots. The researchers proposed a framework integrating ECM, IS Success Model, and TAM. The results revealed that Information Quality and Service Quality factors positively affect users' satisfaction. This finding is parallel with the main study of the IS Success Model developed by DeLone and McLean (1992). Additionally, satisfaction was found to have a significant effect on users'

continuance intention toward AI Chatbots. The users show a higher level of satisfaction and are more eager to continue using AI Chatbots when they perceive it as enjoyable and useful (Ashfaq et al., 2020).

Building upon all these findings, definitions and assertions, the present study aims to examine the influencing factors driving Agile methodology continuance intention and finally to propose a model in Agile methodology context.

2.3. Theoritical Models and Frameworks Related to Continuance Intention

In this part, the key theoretical models and frameworks concerning continuance intention are presented. This part offers an overview of the constructs and their interrelationships, highlighting their significance for both research and practical use.

2.3.1. Theory of Reasoned Action (TRA)

The Theory of Reasoned Action (TRA) was suggested by Martin Fishbein and Icek Ajzen in 1975 to examine the relationship between attitudes and behaviors. The theory argues that an individual's behavioral intention to carry out an action determines their actual behavior, and attitudes toward behavior and subjective norms influence their behavioral intention (Fishbein & Ajzen, 1975).

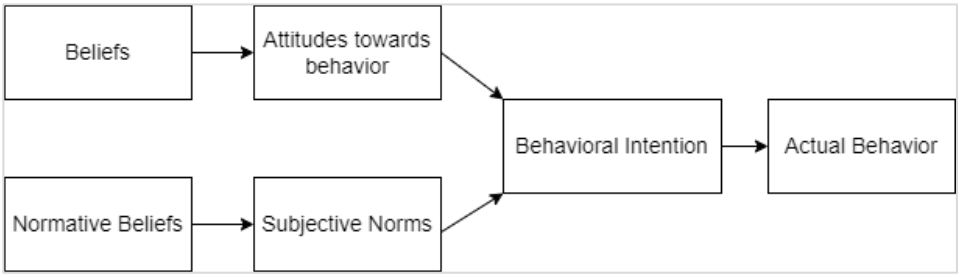

Figure 2: Theory of Reasoned Action (Fishbein & Ajzen, 1975)

As can be inferred from Figure 2, TRA suggests that two key factors influence behavioral intention: *attitudes* and *subjective norms*.

Attitudes reflect an individual's positive or negative evaluation of the behavior, influenced by beliefs about its outcomes (Fishbein & Ajzen, 1975).

Subjective norms are perceptions that the majority of people who matter to the subject consider the subject should engage in or avoid the behavior. Together, attitudes and subjective norms shape an individual's intention to perform a behavior, predicting the likelihood of exhibiting that behavior (Fishbein & Ajzen, 1975).

2.3.2. Theory of Planned Behavior (TPB)

Ajzen (1991) proposed the Theory of Planned Behavior (TPB), aiming to extend the explanatory scope of the TRA. Thus, the TPB is originated from TRA.

As shown in Figure 3, TPB suggests that in addition to *attitudes* and *subjective norms*, an individual's *perceived behavioral control* significantly influences their intentions and behaviors (Ajzen, 1991).

According to TPB, if someone believes they have control over a behavior, they are more likely to intend to engage in it. Therefore, this theory inspected the perceived behavioral control effect on actual behavior and behavioral intention (Ajzen, 1991).

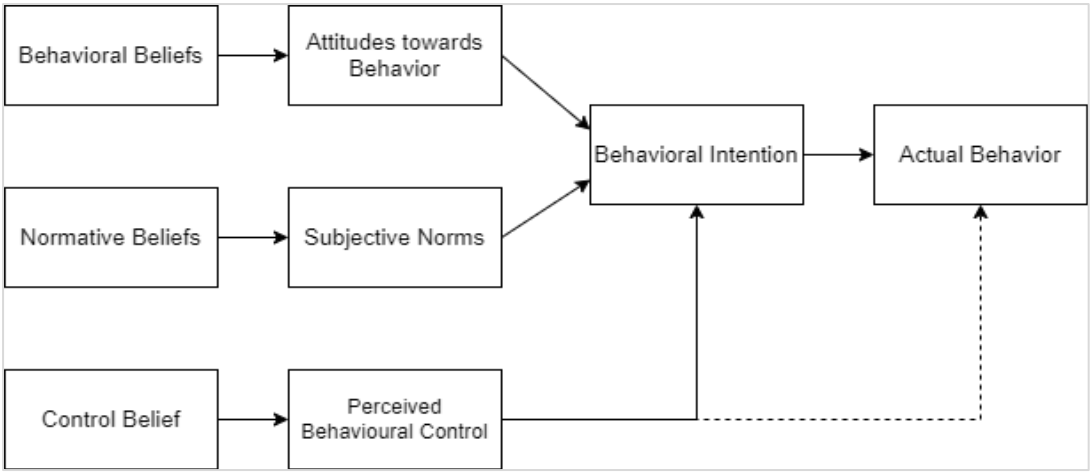

Figure 3: Theory of Planned Behavior (Ajzen, 1991)

2.3.3. Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) is a theoretical framework proposed by Fred Davis in 1989 to understand how users adopt and accept a new technology. This theory is developed based on TRA. TAM has been widely applied to examine user adoption of a technology or a system.

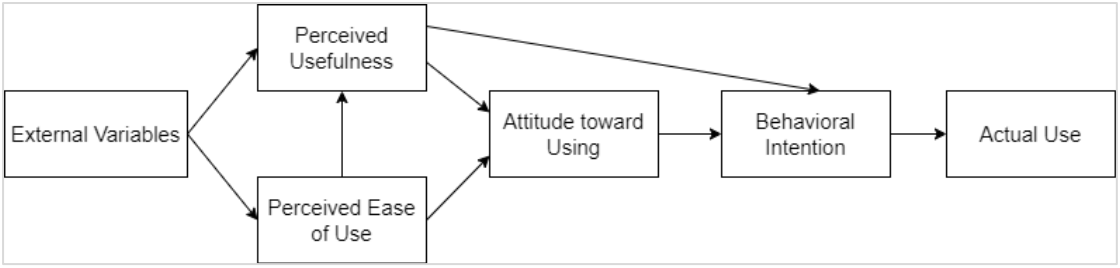

Figure 4: Technology Acceptance Model by Davis (1989)

As illustrated in Figure 4, according to TAM, actual use of a technology is predicted by behavioral intention. Behavioral intention is determined by the perceived usefulness of the technology and attitude toward using it. In addition, perceived usefulness and perceived ease of use determine the attitude toward using the technology.

According to TAM, *perceived usefulness* refers to the belief that a specific technology will increase performance (Davis, 1989). In addition, *perceived ease of use* refers to the perception of how effortless it is to use a specific technology (Davis, 1989).

Moreover, external variables directly influence perceived usefulness and perceived ease of use. Correspondingly, external variables indirectly affect the actual use of the system (Davis, 1989).

2.3.4. Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology (UTAUT) is a comprehensive model developed by Venkatesh and colleagues in 2003 to clarify the adoption and usage of new technologies. Venkatesh and colleagues (2003) combined elements from eight acceptance models, including TRA, TAM, and TPB, and synthesized UTAUT.

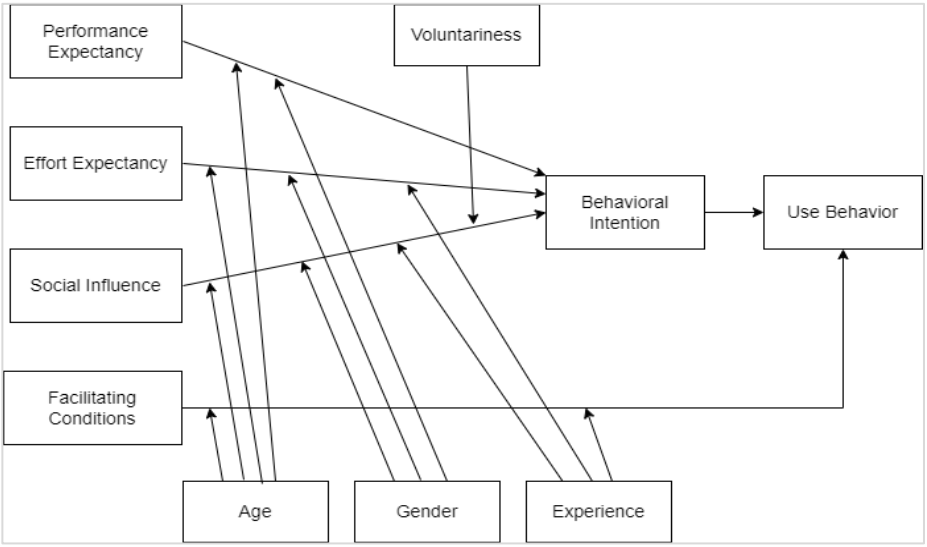

Figure 5: UTAUT (Venkatesh et al., 2003)

As seen in Figure 5, the model identifies four critical determinants of intention and technology usage: *performance expectancy*, *effort expectancy*, *social influence*, and *facilitating conditions*. In addition, UTAUT incorporates variables such as voluntariness, gender, age, and experience to consider individual differences in technology adoption.

2.3.5. Expectation Confirmation Theory (ECT)

Expectation Confirmation Theory (ECT) was proposed by Richard L. Oliver in 1980. This theory analyzes individuals' interpretation and response to information based on their preexisting beliefs and expectations. ECT highlights how customer experience substantially influences future actions to continue utilizing a product or service (Oliver, 1980). The theory achieves this by clarifying the connections between expectations, perceived performance, satisfaction, confirmation, and continuance intention.

Figure 6 illustrates the ECT, including its five main factors*: expectation, confirmation, perceived performance, satisfaction,* and *continuance intention.* According to ECT, an individual's repurchase or continuance intention for a service or product is primarily determined by satisfaction with its usage (Bhattacherjee, 2001).

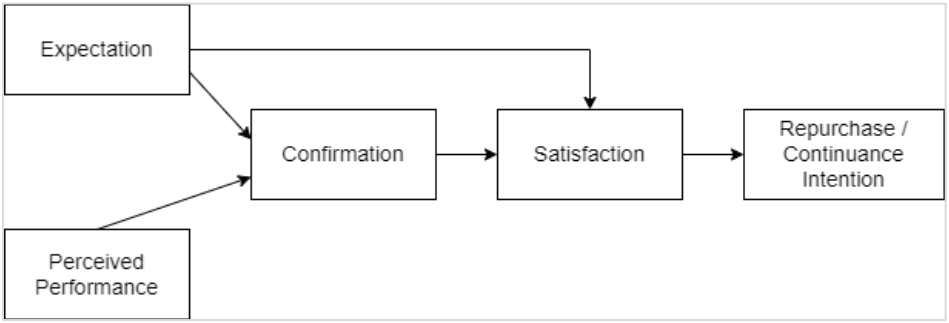

Figure 6: Expectation Confirmation Theory (Oliver, 1980)

ECT describes customer behavior as follows: The customers first set expectations before purchasing. They assess the product or service's performance after using it. Then, they evaluate if their initial expectations have been met by contrasting this performance with their initial expectation. Their degree of satisfaction is influenced by this confirmation. Customers who are satisfied with a product or service are more likely to repurchase or continue to use it (Bhattacherjee, 2001; Oliver, 1980).

2.3.6. Expectation Confirmation Model (ECM)

Drawing upon the ECT (Oliver, 1980) and TAM (Davis, 1989), the Expectation Confirmation Model (ECM) was developed by Bhattacherjee (2001), aiming to explain customer characteristics that affect their decision to repurchase. ECM is a widely recognized model that explains users' continuance intention. This model was among the initial attempts to conceptualize and examine a model that distinguishes between the concepts of "acceptance" and "continuance".

ECM has been utilized across various contexts to clarify the factors influencing individuals' continuance intention following the adoption and initial usage (Bhattacherjee

& Lin, 2015; Cho, 2016; Joo et al., 2017; Mamakou, 2023; Thong et al., 2006). These studies revealed the exploratory nature of ECM.

As illustrated in Figure 7, the ECM concerns three factors that determine users' continuance intention: *confirmation, perceived usefulness,* and *satisfaction*. The user's continuance intention is determined by the system's perceived usefulness and the overall satisfaction derived from its usage (Bhattacherjee, 2001).

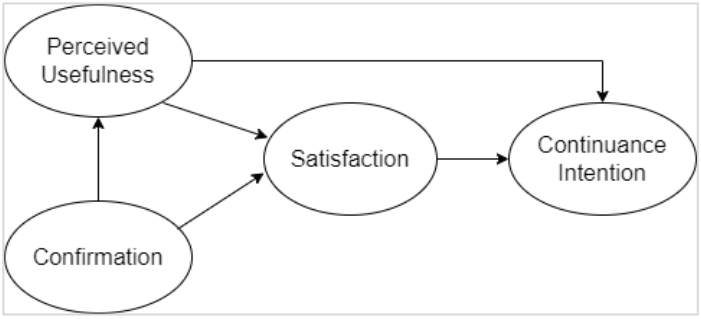

Figure 7: Expectation Confirmation Model (Bhattacherjee, 2001)

According to ECM, the degree to which users' expectations are confirmed determines their satisfaction, together with perceived usefulness. To summarize, satisfaction and perceived usefulness determine customers' continuance intention, whereas confirmation and perceived usefulness lead to satisfaction (Bhattacherjee, 2001).

Bhattacherjee (2001) indicated that further extensions of the model would help to understand continuance intention better. Therefore, ECM was used as a base model in this thesis study to investigate influencing factors for continuance intention towards Agile methodology usage.

2.3.7. IS Success Model

The IS Success Model is initially proposed by DeLone & McLean (1992), and after adjusted by its authors in 2003. The IS Success Model is illustrated in Figure 8.

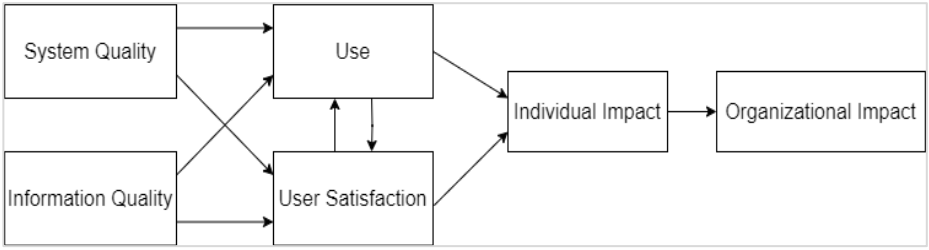

Figure 8: IS Success Model (DeLone & McLean, 1992)

The model proposes six interrelated dimensions for IS success: *system quality*, *information quality*, *IS use*, *user satisfaction*, *individual impact*, and *organizational impact* (DeLone & McLean, 1992). Furthermore, the researchers argue that use and user satisfaction, which are affected by system quality and information quality, determine organizational and individual impact (DeLone & McLean, 1992).

In a subsequent study, DeLone & McLean (2003) extended the IS Success Model with a new variable, which is *Service Quality*.

2.4. Systematic Literature Review on Continuance Intention

Systematic literature review (SLR) is a rigorous technique that discovers, assesses, and analyzes previous research on a particular subject (Kitchenham et al., 2009). It requires a thorough search, followed by carefully screening and selecting relevant studies. SLR highlights research gaps and offers a comprehensive picture of existing conditions by combining the results of various studies. Accordingly, this section examines the existing literature and presents an evaluation of findings concerning the influencing factors for continuance intention.

2.4.1. Conducting Systematic Literature Review

The research question establishes the SLR's scope, directs the development of the research procedure, and highlights its most essential components (Brereton et al., 2007). In that regard, firstly, the research question of the current study was specified in accordance with the focus of the study as the following:

- What factors influence Agile practitioners' intention to continue using Agile methodology?

In order to conduct a search for the studies, the search keywords were defined, and the ScienceDirect database was selected to retrieve studies. Search keywords identified for study retrieval were as follows:

- "continuance intention" OR
- "information technology continued use" OR
- "post-adoption" OR
- "post-adoptive intention"

After listing the studies from the ScienceDirect database according to search keywords, research articles related to computer science between 2014 and 2023 were filtered. The language was limited to English. Consequently, 545 papers were obtained. The steps followed during SLR are provided in Figure 9.

The title and abstract of the 545 studies were analyzed, and the studies that did not mention the factors influencing continuance intention in their title and abstract were excluded. These studies were outside of the scope of the present systematic literature review. In addition, studies that did not provide empirical data according to their abstracts were discarded.

Following that, 82 studies' contents remained to be critically appraised. At this step, the studies that did not mention about the influencing factors of continuance intention in their content were discarded. In addition, the articles which did not provide empirical data according to their contents were eliminated. As a result of this step, 30 studies remained.

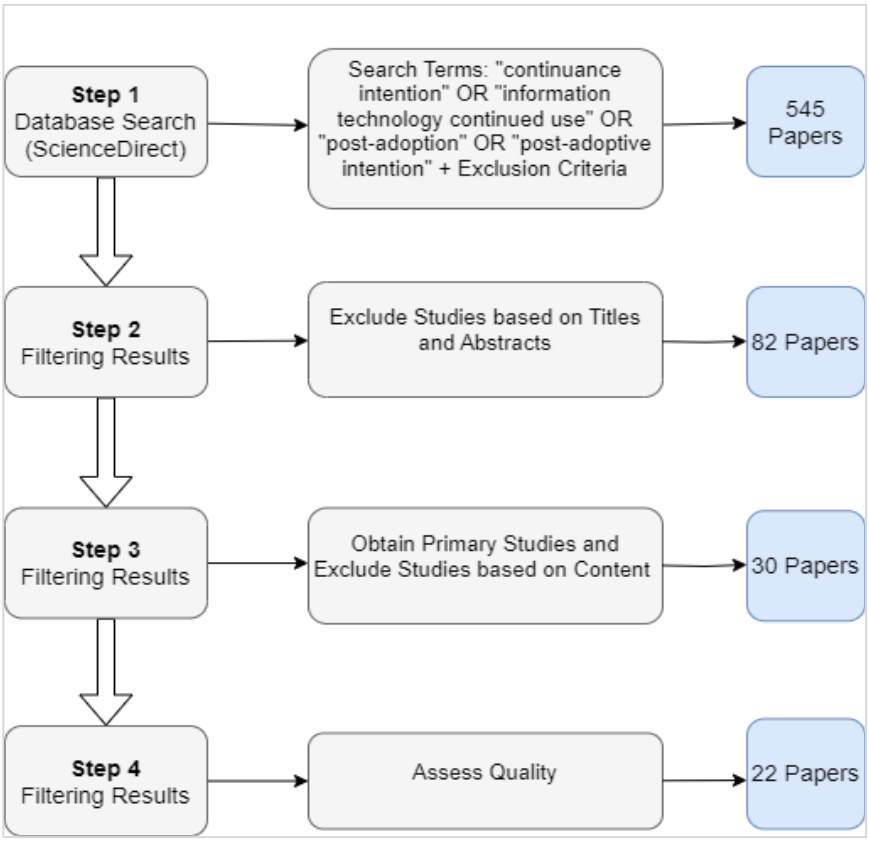

Figure 9: SLR Study Screening Process

Lastly, the papers underwent a thorough examination, and 8 out of 30 were excluded. This elimination occurs due to insufficient information to derive any benefit from them. Moreover, the relevance of the factors discussed in the studies was evaluated within the context of Agile methodology. For instance, some factors mentioned in the studies were incompatible with the context of Agile methodology continuance intention. In addition, it is investigated that whether the studies presented well-defined findings with reliable results and supported conclusions.

As a result of the systematic literature review, 22 studies remained to be analyzed thoroughly in terms of the influencing factors for continuance intention that they referred.

2.4.2. Evaluation of Filtered Studies

In order to provide more detailed information about the filtered studies obtained as a result of SLR, the studies were examined according to their publication year and subject area that they worked on. This section provides the analysis results of the 22 studies based on these specifications. Firstly, the studies were analyzed according to their publication year. The SLR was conducted for the studies published between 2014 and 2023. The distribution of the filtered studies from 2014 to 2023 based on years is provided in Figure 10.

As can be seen from the Figure 10, at least one study was conducted in each specified year. The most significant number of the studies belonged to 2015 and 2017 as five studies.

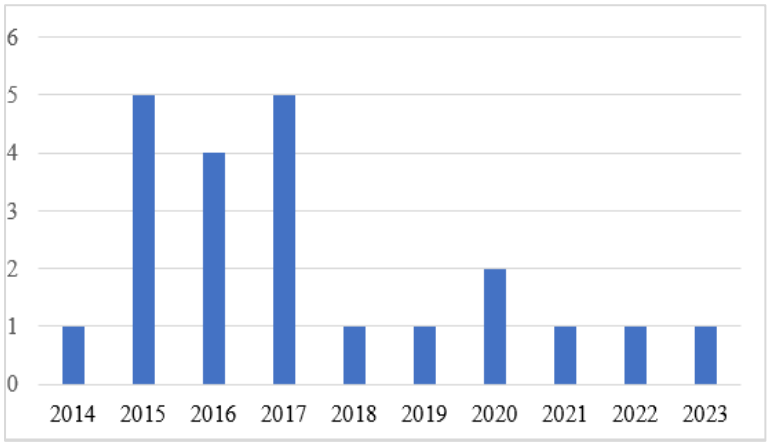

Figure 10: The Distribution of Filtered Studies by Years

Moreover, the studies were classified according to their subject areas. The contents of the 22 studies were read and categorized based on the subject area they studied. The distribution of the studies according to the subject area they studied is presented in Figure 11.

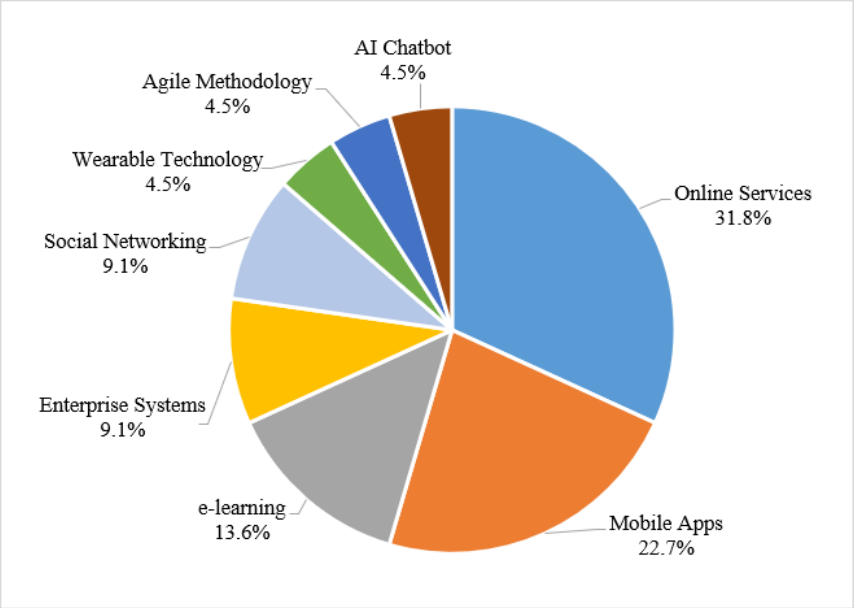

Figure 11: The Distribution of the Studies by Subject Area

As can be inferred from Figure 11, the subject areas that the studies worked on varied. In the studies, the researchers examined the users' continuance intention mostly in online services, mobile apps, and e-learning. Among these 22 studies, 7 of them studied online services, 5 of them studied mobile apps, 3 of them studied e-learning, 2 of them studied enterprise systems, 2 of them studied social networking, 1 of them studied wearable technology, 1 of them studied AI Chatbot and 1 of them studied Agile methodology.

As it is seen, the number of studies regarding Agile methodology continuance intention proves the scarcity of research about that subject, which is the motivation of the present study.

2.4.3. Evaluation of Factors Extracted from Filtered Studies

In order to extract and categorize the factors they mentioned as influencing factors regarding continuance intention, 22 studies' contents were examined. It is seen that these studies investigated users' continuance intention in various IS contexts. Initially, the factors that they mentioned were listed based on the study on an Excel Worksheet. Then, the factors were categorized into 31 common constructs based on these 22 studies. Table 3 presents the 15 factors which were mentioned in more than one study with the related studies and the frequencies.

Table 3: Factors Mentioned in Filtered Studies

Factor	Studies	Frequency
Satisfaction	Ashfaq et al., 2020; Chen et al., 2018; Cho, 2016; Gao et al., 2015; Guo et al., 2016; Hadji & Degoulet, 2016; Hsiao et al., 2016; Hsu & Lin, 2015; Joo et al., 2017; Lankton et al., 2014; Mamakou, 2023; Mellikeche et al., 2020; Mouakket, 2015; Pereira & Tam, 2021; Sun & Mouakket, 2015	15
Perceived Usefulness	Ashfaq et al., 2020; Cheng et al., 2015; Chen et al., 2018; Cho, 2016; Hadji & Degoulet, 2016; Hsiao et al., 2016; Ifinedo, 2017; Joo et al., 2017; Mamakou, 2023; Mellikeche et al., 2020; Mouakket, 2015; Pereira & Tam, 2021; Sun & Mouakket, 2015; Wu & Chen, 2017	14
Confirmation	Chen et al., 2018; Cho, 2016; Ding, 2019; Hadji & Degoulet, 2016; Hsu & Lin, 2015; Mamakou, 2023; Mellikeche et al., 2020; Mouakket, 2015; Pereira & Tam, 2021	9
Perceived Enjoyment	Ashfaq et al., 2020; Hsiao et al., 2016; Ifinedo, 2017; Joo et al., 2017; Merikivi et al., 2017; Mouakket, 2015; Pereira & Tam, 2021	7
Perceived Ease of Use	Ashfaq et al., 2020; Cheng et al., 2015; Chen et al., 2018; Cho, 2016; Merikivi et al., 2017; Wu & Chen, 2017	6
Habit	Chen et al., 2018; Goyal et al., 2022; Hsiao et al., 2016; Hsu & Lin, 2015; Mouakket, 2015	5
Quality	Gao et al., 2015; Hadji & Degoulet, 2016; Mellikeche et al., 2020; Sun & Mouakket, 2015	4
Attitude	Cheng et al., 2015; Ifinedo, 2017; Wu & Chen, 2017	3
Trust	Gao et al., 2015; Goyal et al., 2022; Lankton et al., 2014	3
Social Influence	Goyal et al., 2022; Hsiao et al., 2016; Wu & Chen, 2017	3
Perceived Hedonic Value	Goyal et al., 2022; Guo et al., 2016; Hong et al., 2017	3
Perceived Innovativeness	Ding, 2019; Hong et al., 2017	2
Facilitating Conditions	Goyal et al., 2022; Mellikeche et al., 2020	2
Perceived Utilitarian Value	Guo et al., 2016; Hong et al., 2017	2
Flow	Gao et al., 2015; Guo et al., 2016	2

According to the studies analyzed, satisfaction was the most mentioned factor influencing continuance intention. In addition to satisfaction, perceived usefulness and confirmation was among the most frequently mentioned factors which are already exist in ECM.

2.4.4. Additional Factors Extracted from Systematic Literature Review

In order to propose an extended model of ECM in the context of Agile methodology continuance intention, some additional factors were identified by comprehensively examining existing continuance intention literature. Since satisfaction, confirmation, and perceived usefulness were already included in ECM, these factors were removed from the search results to specify other additional factors for the model to be proposed. After removing these factors from the list, 12 factors remained. The remaining 12 factors mentioned in more than one study are listed with the related studies and the frequencies in Table 4.

Table 4: Factors from Filtered Studies After Removing ECM Constucts

Factor	Studies	Frequency
Perceived Enjoyment	Ashfaq et al., 2020; Hsiao et al., 2016; Ifinedo, 2017; Joo et al., 2017; Merikivi et al., 2017; Mouakket, 2015; Pereira & Tam, 2021	7
Perceived Ease of Use	Ashfaq et al., 2020; Cheng et al., 2015; Chen et al., 2018; Cho, 2016; Merikivi et al., 2017; Wu & Chen, 2017	6
Habit	Chen et al., 2018; Goyal et al., 2022; Hsiao et al., 2016; Hsu & Lin, 2015; Mouakket, 2015	5
Quality	Gao et al., 2015; Hadji & Degoulet, 2016; Mellikeche et al., 2020; Sun & Mouakket, 2015	4
Attitude	Cheng et al., 2015; Ifinedo, 2017; Wu & Chen, 2017	3
Trust	Gao et al., 2015; Goyal et al., 2022; Lankton et al., 2014	3
Social Influence	Goyal et al., 2022; Hsiao et al., 2016; Wu & Chen, 2017	3
Perceived Hedonic Value	Goyal et al., 2022; Guo et al., 2016; Hong et al., 2017	3
Perceived Innovativeness	Ding, 2019; Hong et al., 2017	2
Facilitating Conditions	Goyal et al., 2022; Mellikeche et al., 2020	2
Perceived Utilitarian Value	Guo et al., 2016; Hong et al., 2017	2
Flow	Gao et al., 2015; Guo et al., 2016	2

CHAPTER 3

CONCEPTUAL FRAMEWORK

In the present thesis study, concerning the findings resulting from SLR, a continuance intention model is proposed in the context of Agile methodology. This chapter elaborates on the model proposition and hypothesis development process for the study.

3.1. Overview of Model & Hypothesis Development Process

As ECM is a milestone model in the literature to elaborate continuance intention, it was determined as a base model to investigate influencing factors for continuance intention towards Agile methodology usage. The pioneer of ECM, Bhattacherjee (2001), also stated that further extension of the model would help to understand continuance intention better. Figure 12 illustrates the development stages of the Agile methodology continuance intention model.

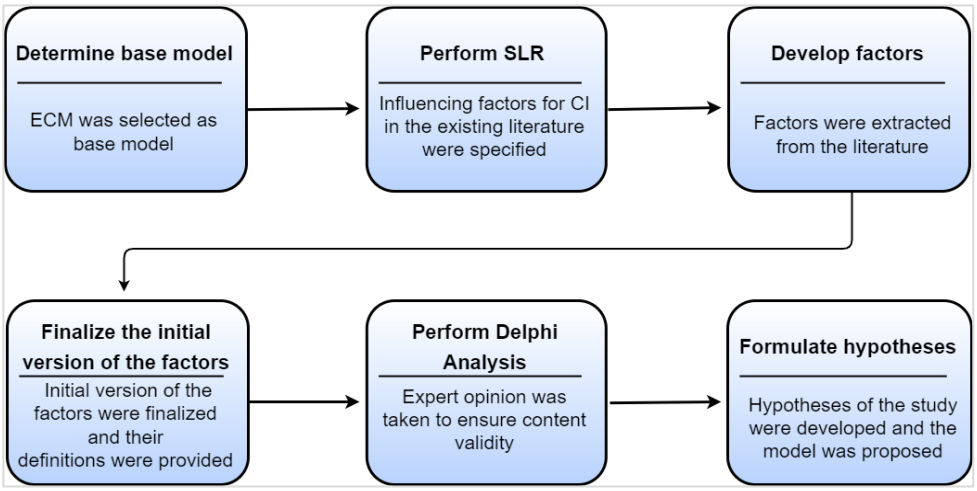

Figure 12: The Development Stages of the Model

3.2. Initial Model Proposition

After determining ECM as the base model, an SLR was conducted to identify influencing factors for continuance intention in the current literature. As a result of the SLR, the factors were extracted from the existing literature. This process is explained in section 2.4.1 in detail. The extracted factors, their sources, definitions in the present study context, and their frequencies are provided in Table 5.

Table 5: Extracted Factors with Their Definitions and Frequencies

Source	Factor	Definition	Frequency
ECM	Satisfaction	Practitioners' feelings about prior Agile methodology usage. (Bhattacherjee, 2001)	15
ECM	Perceived Usefulness	Practitioners' perception regarding anticipated benefits of using Agile methodology. (Bhattacherjee, 2001)	14
ECM	Confirmation	Practitioners' perception regarding how well Agile methodology performs in comparison to their expectations. (Bhattacherjee, 2001)	9
Result from SLR	Perceived Enjoyment	Regardless of any expected performance outcome, how much a user enjoys the activity of using Agile methodology. (Davis et al., 1992)	7
Result from SLR	Perceived Ease of Use	"the degree to which a person believes that using a particular system would be free of effort." (Davis, 1989, p.320)	6
Result from SLR	Habit	"a well-learned action sequence, originally intentional, that may be repeated as it was learned without conscious intention, when triggered by environmental cues in a stable context." (de Guinea & Markus, 2009, p.437)	5
Result from SLR	Quality	The desirable attributes of Agile methodology such as ease of use, flexibility, reliability, and simplicity of learning. (Petter et al., 2008)	4
Result from SLR	Attitude	The extend of an individual's positive or negative assessment towards Agile methodology. (Fishbein & Ajzen, 1975)	3
Result from SLR	Trust	The practitioners' psychological belief and confidence in Agile Methodology. (Goyal et al., 2022)	3
Result from SLR	Social Influence	The degree of influence on the interaction among people, and the perceived pressure to exhibit a behavior. (Rice & Aydin, 1991; Venkatesh & Brown, 2001)	3
Result from SLR	Perceived Hedonic Value	The degree of which a person believes the enjoyment will be the main advantage of using Agile methodology. (Dhar & Wertenbroch, 2000)	3
Result from SLR	Personal Innovativeness	The extent to which a person is open to engaging with a new methodology. (Agarwal & Prasad, 1998)	2

Table 5 (cont.)

Result from SLR	Facilitating Conditions	The extent to which a person perceives the presence of organizational and technical infrastructure to facilitate the implementation of Agile methodology.(Venkatesh et al., 2003)	2
Result from SLR	Perceived Utilitarian Value	The degree of which a person believes in purpose-driven, logical, and practical intention of using Agile methodology. (Dhar & Wertenbroch, 2000)	2
Result from SLR	Flow	A comprehensive experience that individuals have when they fully engage in Agile methodology. (Csikszentmihalyi & Csikszentmihalyi, 1988)	2

Considering the factors extracted from SLR on continuance intention, additional factors were specified to form an initial model. Since satisfaction, confirmation, and perceived usefulness factors already exist, the other 12 factors were added. The initial version of the model is illustrated in Figure 13.

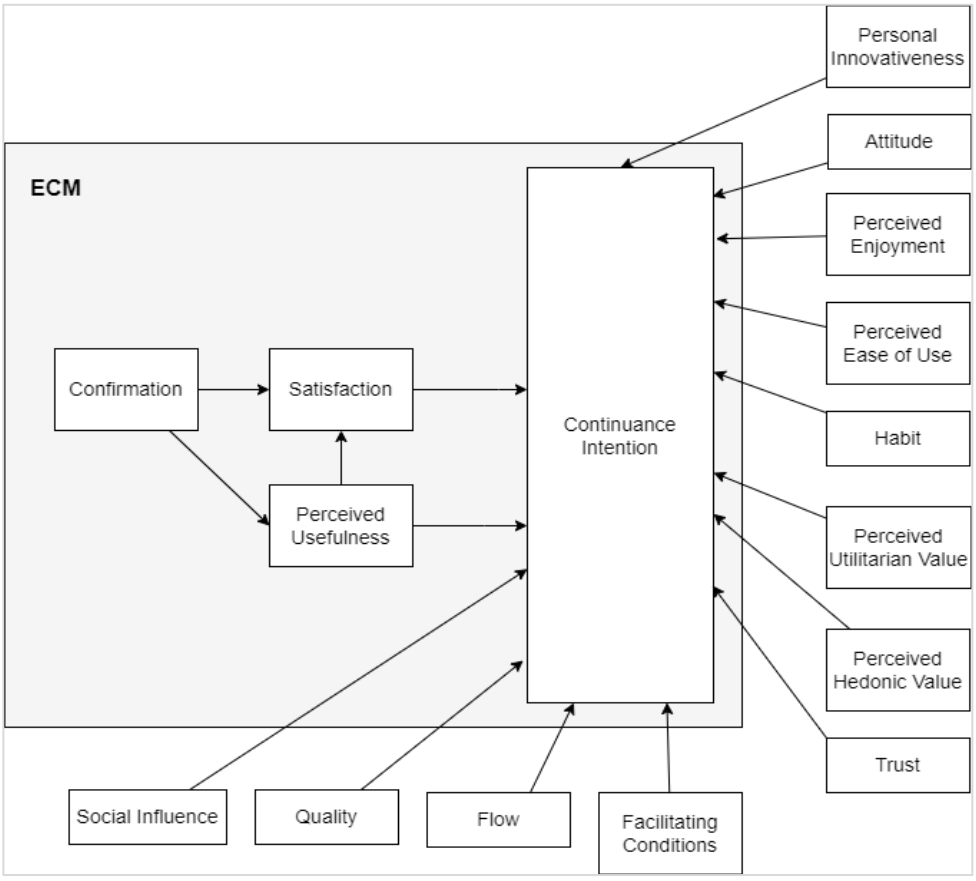

Figure 13: Initial Model

Following that, a Delphi Analysis was conducted to seek expert opinion and ensure the content validity. According to the results of the Delphi Analysis, some of the factors included in the initial model were eliminated. The details of the Delphi Analysis are provided in the following section.

3.3. Delphi Analysis

A set of factors was extracted based on the examination of relevant literature regarding factors influencing continuance intention. These factors serve as the foundation for constructing the initial model, which undergoes refinement through Delphi Analysis to ensure content validity.

After specifying additional factors for the Agile methodology continuance intention model through a systematic literature review, the conventional Delphi method was carried out to determine the most appropriate factors among the identified additional ones. The aim was to put forth a more concise and contextually valid model tailored to the specific research context of the study. The conventional Delphi method is a strategy seeking consensus among a group of experts on a specific topic (Linstone & Turoff, 1975).

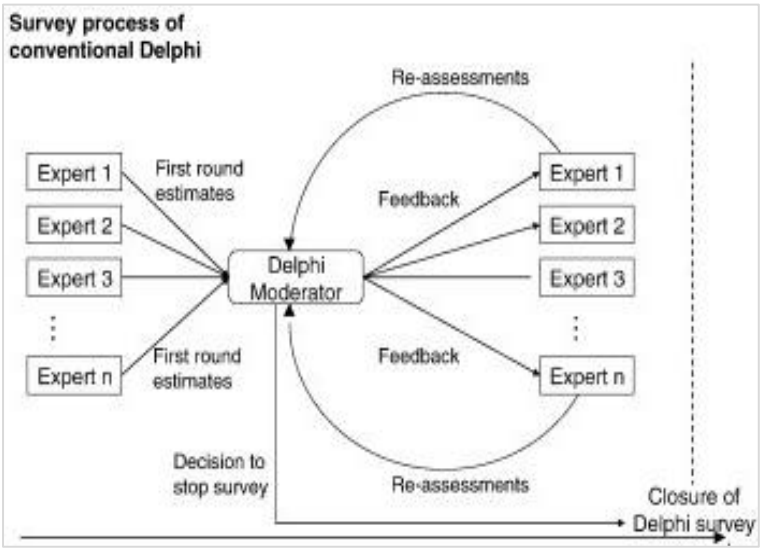

Figure 14: Survey Process of Conventional Delphi (Gnatzy et al., 2011, p.1686)

As seen in Figure 14, in the survey process of the conventional Delphi method, a multi-phase, anonymous communication strategy is used with multiple survey rounds (Turoff, 1970). Therefore, in the current study, two rounds were conducted in order to seek expert opinion and eliminate some of the factors from the initial model. According to Okoli & Pawlowski (2004), for the execution of this method, a panel of 10-18 experts are recommended. Therefore, 10 experts from different organizations and backgrounds were chosen to perform Delphi Analysis. The experts were test engineers, business analysts,

and software engineers, and their experience level in using Agile methodology varied between 5 to 10 years. Additionally, 40% of experts were female and 60% were male.

In the first round, the participants were requested to prioritize factors by assigning scores from 12 to 1. For instance, the factor with score of 12 means that it is the most important factor affecting the user's intention to continue using Agile methodology. The Delphi Instrument is attached as Appendix A. The mean scores for each factor resulting from the first round of the Delphi Analysis are presented in Table 6.

Table 6: Delphi Analysis Round 1 Results (mean)

Factor	**Mean**
Perceived Enjoyment	5.9
Perceived Ease of Use	10.7
Habit	9.4
Quality	5.7
Attitude	8.9
Trust	3.5
Social Influence	3.6
Perceived Hedonic Value	3.9
Perceived Innovativeness	3.8
Facilitating Conditions	10.5
Perceived Utilitarian Value	7.3
Flow	4.9

At the beginning of the second round, the results of the first round were shared with the experts. Then, by considering the results of the first round, the participants were requested to reevaluate their responses in the second round. The mean scores for each factor resulting from the second round of the Delphi Analysis are presented in Table 7.

Table 7: Delphi Analysis Round 2 Results (mean)

Factor	**Mean**
Perceived Enjoyment	6.5
Perceived Ease of Use	10.8
Habit	9.4
Quality	5.3
Attitude	8.7
Trust	3.6
Social Influence	3.2
Perceived Hedonic Value	4.2
Perceived Innovativeness	3.4
Facilitating Conditions	10.6
Perceived Utilitarian Value	7.4
Flow	4.9

As can be seen, there is not a significant difference between the first and second round results. Considering these Delphi Analysis results, the factors with a top-four mean value were selected for the modified model.

3.4. Model Modification & Hypothesis Development

In order to propose a model and formulate hypotheses for the present study, a SLR was performed to specify the factors included in the model. After that, expert opinion was taken to validate the factors. This section explains these factors included in the modified model in detail.

According to the results of the Delphi Analysis, the factors with a top-four mean value were selected for the modified model. These factors were habit, attitude, perceived ease of use, and facilitating conditions. In addition to ECM constructs, which are confirmation, satisfaction, and perceived usefulness, these four factors were added to the model. The modified model is illustrated in Figure 15.

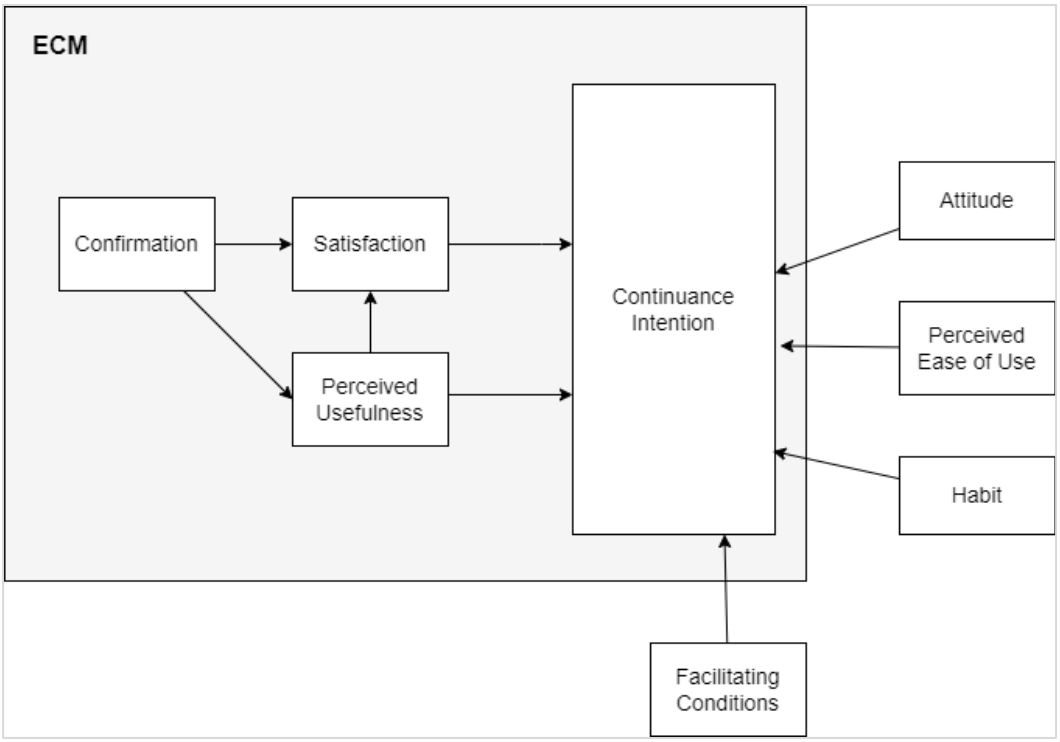

Figure 15: Modified Model

The subsequent sections explain the factors included in the model proposed by the present study, detailing their definitions, reasons for inclusion, and related hypotheses.

3.4.1. ECM Constructs

Confirmation: Confirmation is defined in the present research context as users' perceptions of the alignment between anticipated and actual performance of Agile methodology usage (Bhattacherjee, 2001). Bhattacherjee (2001) found that confirmation is a strong predictor of satisfaction. In addition, the researcher suggests that confirmation has a significant positive effect on perceived usefulness. In that regard, the research studies investigated confirmation in various contexts (Chen et al., 2018; Hsu & Lin, 2015; Mamakou, 2023; Mellikeche et al., 2020; Mouakket, 2015; Pereira & Tam, 2021). According to SLR results, confirmation was investigated in 9 studies, as shown in Table 5. The related research hypotheses regarding confirmation as the following:

H1: Confirmation has a positive effect on practitioners' Satisfaction toward Agile methodology usage.

H2: Confirmation has a positive effect on practitioners' Perceived Usefulness toward Agile methodology usage.

Perceived Usefulness: Bhattacherjee (2001) defines perceived usefulness as *"users' perception of the expected benefits of IS use"* (p.359) and suggests that users' intention to continue using the IS influenced by the perceived usefulness of its ongoing use. Additionally, it is also shown that perceived usefulness has an effect on satisfaction. In that regard, many research studies (Ashfaq et al., 2020; Cho, 2016; Hsiao et al., 2016; Joo et al., 2017; Roca & Gagné, 2008; Thong et al., 2006; Wu & Chen, 2017) investigated the perceived usefulness to examine the users' continuance intention in different IS contexts. According to SLR results, perceived usefulness was investigated in 14 studies, as shown in Table 5. The related research hypotheses related to perceived usefulness are as below:

H3: Perceived Usefulness has a positive effect on practitioners' Satisfaction toward Agile methodology usage.

H4: Perceived Usefulness has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.

Satisfaction: Satisfaction is defined as *"users' feelings about prior IS use"* (Bhattacherjee, 2001, p.359), and Bhattacherjee (2001) stated that satisfaction is the strongest predictor of users' continuance intention. In parallel with Bhattacherjee (2001), a substantial body of research supports the significant effect of satisfaction on users' continuance intention (Ashfaq et al., 2020; Hsiao et al., 2016; Thong et al., 2006). The results of SLR show that the effect of satisfaction on users' continuance intention is investigated in various contexts in the literature. According to SLR results, satisfaction was the most mentioned factor

involved in 15 studies, as shown in Table 5. The related research hypothesis regarding satisfaction is as follows:

H5: Satisfaction has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.

3.4.2. Additional Constructs

Perceived Ease of Use: Perceived Ease of Use in the present research context is defined as the extent to which an individual perceives using Agile methodology as easy to learn and understand while requiring minimal effort (Davis, 1989). Put differently, when an individual considers that learning and using Agile methodology will take less time and effort, its perceived ease of use increases. Perceived ease of use is also an essential factor in understanding continuance intention since it decreases effort and allows people to concentrate on acquiring new information rather than trying to figure out how the system operates (Yan, Filieri, & Gorton, 2021). This construct was investigated in 6 studies resulted from SLR. The related research hypothesis is as the following:

H6: Perceived Ease of Use has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.

Habit: Habit is defined as a familiar series of actions, initially done with intent, that can be repeated automatically without conscious effort when prompted by consistent environmental signals in a stable setting (de Guinea & Markus, 2009). When someone repeatedly engages in an action and feels satisfied with the outcome, that action evolves into a habit (Verplanken & Orbell, 2003).

Moreover, previous studies found that when the use of an IS turns into a routine, the habit has the potential to enhance the intention to continue using the IS (Chen et al., 2018; Gefen, 2003). In the present study, to examine its influence of practitioners' Agile methodology continuance intention, habit is added as a factor to the proposed model. Also, habit was investigated in 5 studies in the literature analyzed. The related research hypothesis regarding habit is as follows:

H7: Habit has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.

Attitude: TAM emphasizes the connection between attitude and intention, indicating that attitude acts as a favorable or unfavorable tendency towards behavioral intention, which also affects the actual behavior (Davis, 1989). In the context of Agile methodology, attitude refers to how an individual perceives positive or negative perceptions regarding Agile methodology usage (Fishbein & Ajzen, 1975). Attitude was investigated in 3 studies that resulted from SLR. In the present study, habit is added as a factor to the proposed model to examine its effect on practitioners' Agile methodology continuance intention. The related research hypothesis regarding attitude is as below:

H8: Attitude has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.

Facilitating Conditions: The factor of facilitating conditions is defined in the present study context as the extent to which a person perceives the presence of organizational and technical infrastructure to facilitate the implementation of Agile Methodology (Venkatesh et al., 2003). In that regard, the factor of facilitating conditions is added to the proposed model, in order to examine the effect on practitioners' Agile methodology continuance intention. The related research hypothesis is as follows:

H9: Facilitating Conditions have a positive effect on practitioners' Continuance Intention toward Agile methodology usage.

In the context of Agile methodology, there is a scarcity in the application of ECM in investigating practitioners' continuance intention toward its usage. The present study contributes to the knowledge of Agile methodology continuance intention by examining whether the relationships suggested by the ECM work for the Agile methodology continuance intention. Therefore, H1, H2, H3, H4, H5 were established. In addition, H6, H7, H8, H9 were formulated to assess the effects of additional factors on practitioners' continuance intention toward Agile methodology usage.

Table 8: Hypotheses of the Study

No	Hypotheses
H1	Confirmation has a positive effect on practitioners' Satisfaction toward Agile methodology usage.
H2	Confirmation has a positive effect on practitioners' Perceived Usefulness toward Agile methodology usage.
H3	Perceived Usefulness has a positive effect on practitioners' Satisfaction toward Agile methodology usage.
H4	Perceived Usefulness has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.
H5	Satisfaction has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.
H6	Perceived Ease of Use has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.
H7	Habit has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.
H8	Attitude has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.
H9	Facilitating Conditions have a positive effect on practitioners' Continuance Intention toward Agile methodology usage.

Consequently, in this part, the study's model proposition and hypothesis development process were explained in detail. The research hypotheses of the present thesis study are presented in the Table 8.

CHAPTER 4

METHODOLOGY

In this chapter, the research methodology of the study is explained. The purpose of this chapter is to elaborate on the sample, research design, data collection instrument, data collection and analysis procedures, internal and external validity of the present thesis study.

4.1. Sample and Research Design

The aim of the present thesis study is to identify the factors that influence practitioners' intention to continue using Agile methodology. The study also aims to examine the effect of identified factors on Agile methodology continuance intention and finally propose a model. Put differently, the study aims to provide valuable insights into the factors that drive the continued use of Agile methodology within organizations. Thus, the study intends to address the following research question:

- What are the factors influencing Agile practitioners' intention to continue using Agile methodology?

Initially, a systematic literature review was performed to identify the factors influencing continuance intention. As a result of SLR, an initial model was formed. Following that, a Delphi Analysis was performed to get expert opinions about the factors extracted from the SLR on prioritizing and eliminating them. According to the results of the Delphi Analysis, the factors were revised, and the initially proposed model was modified. In order to validate the proposed model, a questionnaire composed of two sections was prepared as a data collection instrument. All the questionnaire items in the second part were retrieved from the existing continuance intention literature.

In the present thesis study, a cross-sectional survey, one of the quantitative research methods, was implemented to investigate the factors influencing practitioners' continuance intention toward Agile methodology usage. In order to implement the cross-sectional survey research, the data were collected at one time from a sample drawn from the population (Fraenkel et al., 1993). The data were collected from Agile practitioners from different organizations through an online questionnaire. Since reaching all Agile

practitioners requires significant time and effort, convenience sampling was employed (Fraenkel et al., 1993). Convenience sampling involves selecting individuals who are appropriate for the study. The online questionnaire was delivered to Agile practitioners from various professions working at different organizations in Türkiye. At the beginning of the questionnaire, the participants were informed about the estimated duration of completion and their freedom to withdraw from the survey at any time. At the end of the data collection process, 97 participants responded to the questionnaire.

After data collection, the data were analyzed and interpreted using the IBM SPSS Software (version 29) and SmartPLS 4. Initially, SPSS Software was used to interpret descriptive statistics and demographics of the participants. Then, EFA was performed using SPSS Software to explore the number of the factors explained and the total variance resulting from these factors. In order to investigate the relationship between observed variables and constructs in the model, CFA was implemented. Then, the PLS-SEM was executed to analyze the proposed model statistically. Lastly, the results were discussed, compared, and contrasted with the findings of existing literature, and recommendations were made for future research studies.

4.2. Data Collection Instrument

In order to validate the proposed model, an online questionnaire was prepared based on the defined factors in the model. The questionnaire consisted of two sections.

The first section was intended to gather information regarding the participants' demographics. The items in the first section were related to participants' age, gender, Agile methodology experience level, role in the Agile team, the size of the Agile team they were involved in, and information about whether they received any training on Agile methodology usage. The second section of the instrument consisted of 24 5-point Likert scale items. The proposed model includes eight factors, and three questionnaire items were prepared for each factor.

To prepare data collection instrument of the study, initially, the existing literature regarding the studies on continuous intention were reviewed. The previous studies were examined, filtered and grouped in terms of the factors that they studied. The data collection instruments of these studies were examined to investigate items used to measure the factors in them. The items that have been widely used and proven valid in the literature were filtered. Three items were specified for each factor of the proposed model based on filtered ones. Then, the items were translated into Turkish. Two experts revised the items' translation, and the instrument was finalized according to feedbacks and corrections. The items in the second part of the instrument were provided as a 5-point Likert scale ranging from 1 to 5, “1” represents the “Strongly Disagree” and “5” represents the “Strongly Agree”. English versions were also added in parenthesis below the items in the second part to make it easier for participants to understand them.

Table 9: Item List in the Second Part of the Instrument

Factor	Item Code	Item	Reference
Habit	HA1	Using Agile methodology has become automatic /natural to me.	Limayem et al., 2007; Bhattacherjee & Lin, 2015
	HA2	When faced with a particular task, using the Agile methodology is an obvious choice for me.	
	HA3	I have a habit of using the Agile methodology.	
Attitude	AT1	Using Agile methodology is a good idea.	Venkatesh et al., 2003
	AT2	Working with Agile methodology makes work more interesting.	
	AT3	I like working with Agile methodology.	
Facilitating Conditions	FC1	I have the resources necessary to use Agile methodology.	Venkatesh et al., 2008
	FC2	I have knowledge necessary to use Agile methodology.	
	FC3	A specific person or group is available for assistance with difficulties experienced in using Agile methodology.	
Perceived Ease of Use	PEOU1	My interaction with Agile methodology is clear and understandable.	Davis, 1989
	PEOU2	To become skillful at using Agile methodology is easy for me.	
	PEOU3	I find Agile methodology easy to use.	
Continuance Intention	CI1	I intend to continue using Agile methodology rather than discontinue.	Bhattacherjee , 2001
	CI2	I intend to continue using Agile methodology rather than using other alternatives.	
	CI3	I would like to continue my use of Agile methodology.	
Satisfaction	S1	My overall experience of Agile methodology is very satisfied.	Bhattacherjee , 2001
	S2	My overall experience of Agile methodology is very pleased.	
	S3	My overall experience of Agile methodology is absolutely delighted.	
Confirmation	C1	Using Agile methodology improved my job performance / effectiveness better than I initially expected.	Bhattacherjee & Lin, 2015; Bhattacherjee &Premkumar , 2004
	C2	Using Agile methodology increased my personal productivity in my job better than I initially expected.	
	C3	Using Agile methodology was more helpful for my job than I initially expected.	
Perceived Usefulness	PU1	Using Agile methodology enhances my performance and effectiveness on my job.	Davis,1989; Bhattacherjee , 2001
	PU2	Using Agile methodology increases my productivity on my job.	
	PU3	Using Agile methodology ease to do my job.	

The English and Turkish versions of the data collection instrument are attached as Appendix C and Appendix D. The finalized version of the items belonging to the second part of the questionnaire based on related factors and references is provided in Table 9.

4.3. Data Collection and Analysis Procedures

The data were collected from Agile practitioners working at different organizations through an online questionnaire. Since reaching all the Agile practitioners require significant time and effort, convenience sampling method was employed (Fraenkel et al., 1993). The instrument was delivered to Agile practitioners from various professions and organizations. Approval for the application of the survey from Middle East Technical University Human Subjects Ethics Committee is attached as Appendix B. The participants' concerns regarding the study were cleared in the process of administration of the questionnaire. In addition, the participants were informed about the estimated time required to complete the survey and were assured they could leave at any time from the survey. While preparing the questionnaire, an item asking about their experience level in using Agile methodology was added to ensure that the participants are Agile practitioners. The aim was to eliminate participants answering this question as "Never used". At the end of the data collection process, 97 responses were obtained. When the data collection procedure was finished, the data were analyzed and interpreted using the IBM SPSS Software and SmartPLS. Procedures followed during data analysis are illustrated in Figure 16.

Initially, the statistics regarding participants' demographics were reported and interpreted using IBM SPSS Software. Then, descriptive statistics were summarized and evaluated quantitatively. In that regard, frequencies, mean, median, skewness, and kurtosis values of the responses were analyzed.

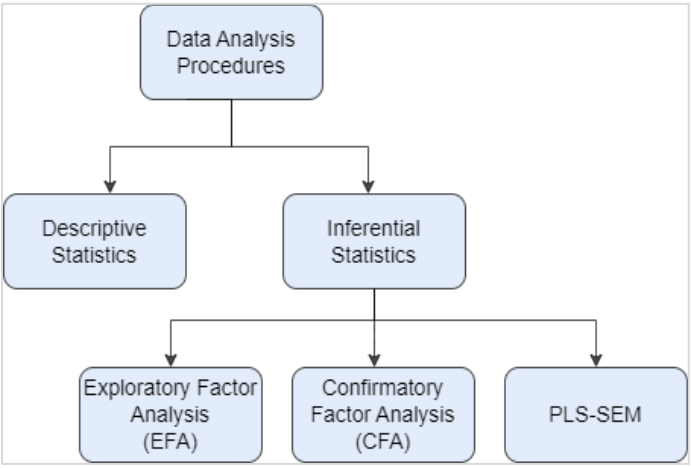

Figure 16: Data Analysis Procedures

Following that, Exploratory Factor Analysis (EFA) was exercised by using the IBM SPSS Software. EFA is a statistical method that identifies the least number of underlying constructs (factors) that explain the pattern of correlations among a set of measured (observed) variables (Fabrigar & Wegener, 2011).

After that, Confirmatory Factor Analysis (CFA) was conducted to examine the hypothesized relationship between observed variables and their underlying constructs (Hair et al., 2020).

Partial Least Squares Structural Equation Modeling (PLS-SEM) was conducted to understand the relationships among the constructs and test the proposed research hypotheses. PLS-SEM is a method for investigating complex relationships among latent variables (Hair et al., 2012). It has firmly established itself as a multivariate technique for examining complex causal relationships among variables. PLS-SEM is a helpful method for analyzing complex models and small samples, enhancing its utility in disciplines such as management, IS, and social sciences (Hair et al., 2012).

4.4. Internal and External Validity of the Study

External and internal validity concerns are essential for any research study. This part discusses internal and external validity issues regarding the present study.

Internal Validity:

Internal validity can be described as the extent to which changes observed in the dependent variable are solely due to the independent variable (Fraenkel et al., 1993). Some measures should be taken to eliminate internal validity threats.

Data collector characteristics was one of the possible threats for internal validity of this study. Since the data collector was the same and the questionnaire was conducted online, the data collector characteristics threat was eliminated.

Moreover, during the data collection process, the data collector could adjust the conditions based on the trends observed in the study. To eliminate this threat, the researcher did not interact with the participants except to clarify the instrument and the study.

External Validity:

External validity is the degree to which the findings of the study can be generalized (Fraenkel et al., 1993). Because the sample was chosen based on the researcher's convenience, the ability to generalize the results to the broader population in this study might be limited.

Furthermore, the small sample size in the survey study might not accurately reflect the entire population of Agile practitioners, potentially resulting in biased findings and

restricting the generalizability of the results. To mitigate this issue, the instrument was distributed to participants employed across diverse companies operating in various domains to increase the sample's representativeness to the population.

CHAPTER 5

RESULTS

This chapter describes the data analysis procedures and results of the survey study, including participants' demographics, descriptive statistics, reliability analysis, Exploratory Factor Analysis, Confirmatory Factor Analysis, and Structural Equation Modeling.

5.1. Demographics of the Participants

Since the items in the questionnaire are set to non-skippable, missing value handling was not required. A total of 97 participants took part in the survey. Although the participants were selected using the convenience sampling method, an item asking participants about their experience in Agile methodology was added to filter the participants who had never used Agile methodology. Therefore, we aimed to ensure that the participants were Agile practitioners. The participants indicating Agile experience level as "Never used" were discarded from the study. Consequently, 4 participants' responses were removed, and 93 participants' responses remained to be examined.

The items regarding participants' demographics were related to their age, gender, Agile methodology experience, role in the Agile team, the size of the Agile team they are involved in, and information about whether they received any training on using Agile methodology.

54.8% (51) of the participants were male, 44.1% (41) of them were female, and 1.1% (1) of the participants did not prefer to answer this question. The distribution of the participants according to gender can be seen in Figure 17.

Furthermore, the ages of the participants varied between 23 and 60. In addition, the majority (58.1%) of the participants were 26-30 years old. The distribution of the participants based on their ages can be seen in Figure 18.

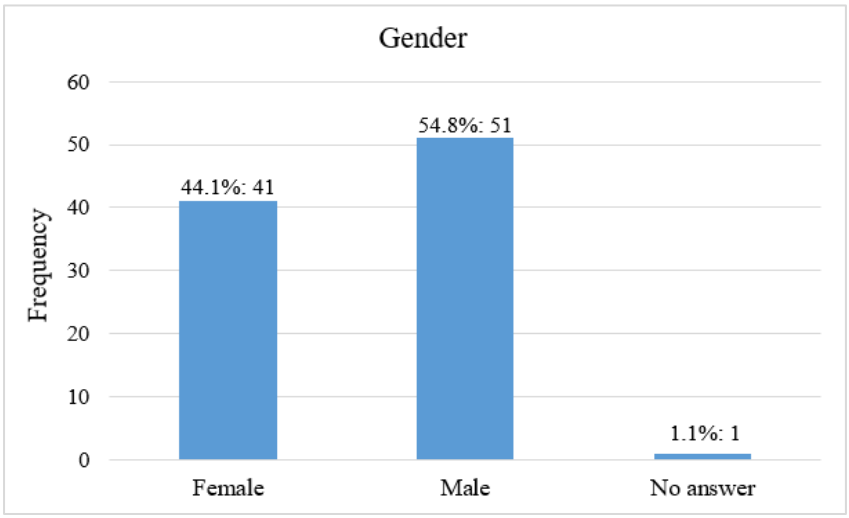

Figure 17: Gender Distribution of Participants

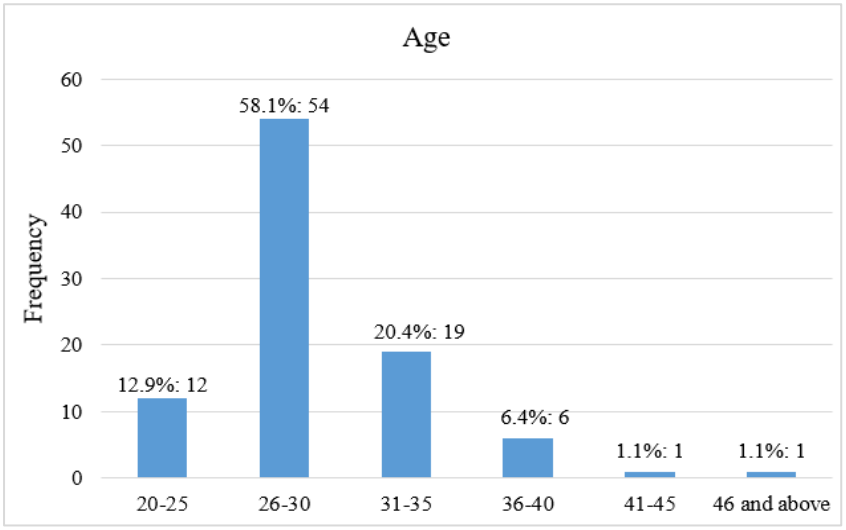

Figure 18: Age Distribution of Participants

Agile methodology experience levels of the participants are displayed in Figure 19. The majority (40.9%) of the participants had 1-3 years of experience in Agile methodology usage.

67.7% (63) of the participants have bachelor's degrees, 29% (27) have master's degrees, and 3.3% (3) of the participants were PhD graduates. The distribution of participants according to their education level can be seen in Figure 20.

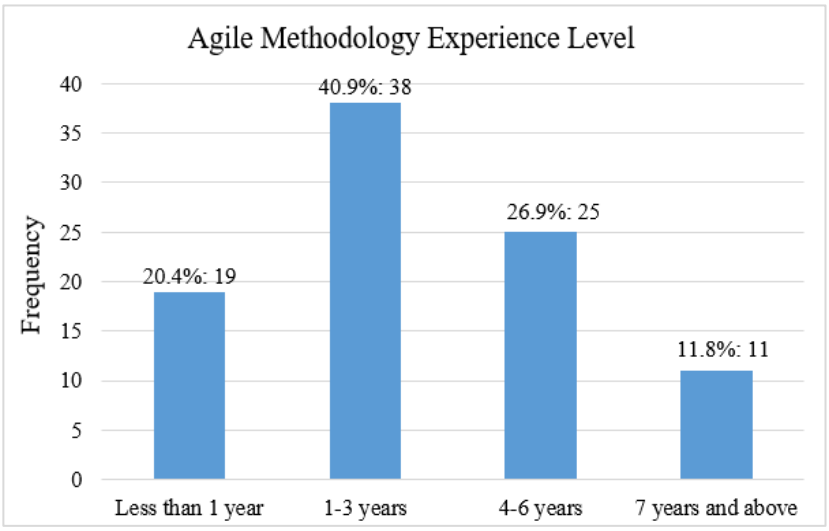

Figure 19: Agile Methodology Experience Levels of Participants

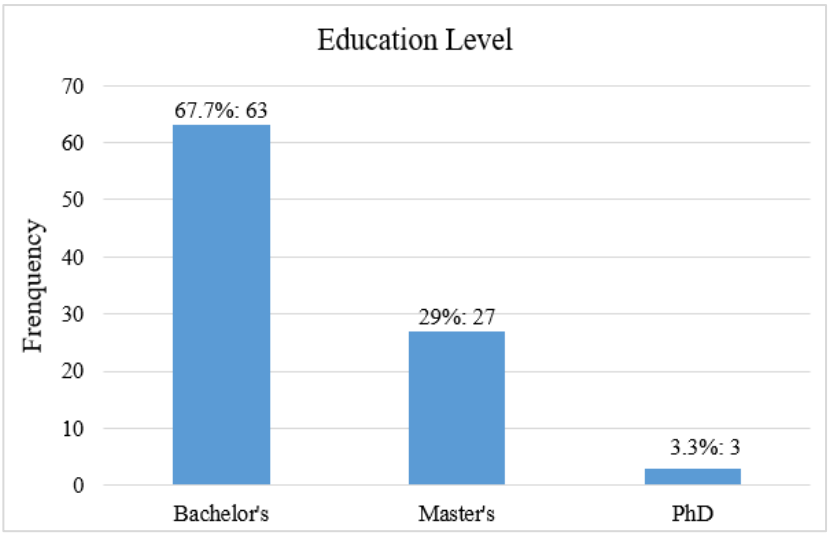

Figure 20: Education Level Distribution of Participants

The participants' Agile team sizes are shown in Figure 21. As seen, the majority (57%) of the participants' Agile team comprised of “5 to 10 people”, 28% of them “11 people and above” and 15% of them “less than 5 people”.

Moreover, while 48.4% (45) of the participants received training related to Agile methodology usage, 51.6% (48) of them did not receive any training.

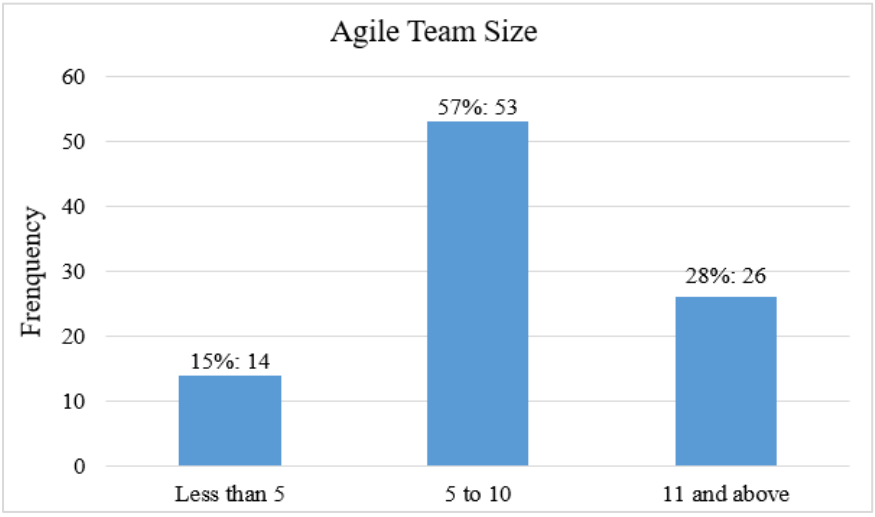

Figure 21: Agile Team Size Distribution of Participants

While the participants were from various professions, the majority (39.8%) of them were software engineers. The "Other" category indicates the roles with frequencies lower than 4, such as DevOps engineer, research engineer, industrial engineer, UX Manager, scrum master, analytics supervisor, and database administrator. The distribution of participants based on job title can be seen in Figure 22.

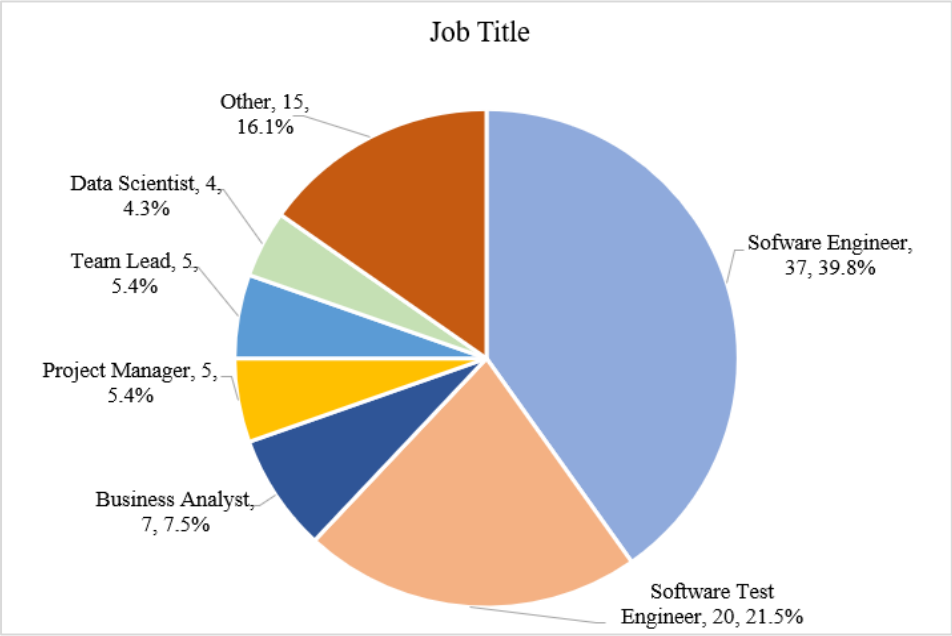

Figure 22: Job Title Distribution of Participants

To summarize, the demographics of the participants were analyzed in detail. The participants have varied in terms of job titles, education level, age, gender, Agile team size and experience levels in using Agile methodology.

5.2. Descriptive Statistics

In this section, the descriptive statistics and normality analysis of the data are presented in order to make inferences about the tendency of the responses. As stated in earlier sections, since the items in the survey are set to non-skippable, missing value handling is not required. With the aim of understanding and analyzing the normality of the data, skewness, kurtosis, standard deviation, and mean values are presented in Table 10.

In order to check normality of the data, the skewness and kurtosis values were analyzed. If the skewness and kurtosis values range between -2 and +2, then the data is distributed normally (Pallant, 2007). When the skewness and kurtosis values are checked, it is seen that they varied between -2 and +2. Therefore, it can be inferred that sample data distribution is normal.

Table 10: Descriptive Statistics of the Items in the Questionnaire

	Mean	**Std. Dev.**	**Skewness**	**Kurtosis**
HA1	3.95	.889	-.842	1.138
HA2	3.56	1.016	-.736	.128
HA3	3.59	.992	-.806	.129
AT1	3.81	.970	-.769	.331
AT2	3.10	1.162	-.065	-.873
AT3	3.73	1.002	-.761	.319
FC1	3.68	1.055	-.681	-.152
FC2	4.01	.840	-.919	1.249
FC3	3.42	1.236	-.604	-.607
PEOU1	3.73	.886	-.876	.962
PEOU2	3.90	.861	-.857	.922
PEOU3	3.88	1.031	-.976	.575
CI1	3.81	1.003	-1.119	1.402
CI2	3.70	.964	-.770	.545
CI3	3.75	.974	-1.211	1.651
S1	3.54	.927	-.530	.019
S2	3.59	.935	-.720	.147
S3	3.49	.951	-.836	.448
C1	3.51	.985	-.678	-.091
C2	3.48	1.017	-.652	-.093
C3	3.52	.974	-.913	.340
PU1	3.55	1.058	-.917	.075
PU2	3.57	1.117	-.801	-.265
PU3	3.70	.987	-.816	.419

5.3. Reliability Analysis

To assess the reliability and internal consistency of the items, Cronbach's alpha values were checked. As Pallant (2007) stated, Cronbach's alpha values greater than 0.7 are considered to be acceptable and the reliability of the instrument increases when the Cronbach's alpha value approaches to 1. Reliability analysis was executed by using IBM SPSS Statistics version 29. As can be seen in Table 11, Cronbach's alpha value was calculated as 0.961, which is in acceptable interval.

Table 11: Initial Reliability Statistics in SPSS

Cronbach's alpha	Cronbach's alpha Based on Standardized Items	N of items
.961	.961	24

Moreover, the Cronbach's alpha value of each construct was calculated and the results are provided in Table 12.

Table 12: Cronbach's alpha Values of the Constructs

Abbreviation	Construct	N of Items	Cronbach's alpha
HA	Habit	3	.837
AT	Attitude	3	.798
FC	Facilitating Conditions	3	.570
PEOU	Perceived Ease of Use	3	.830
CI	Continuance Intention	3	.945
S	Satisfaction	3	.936
C	Confirmation	3	.940
PU	Perceived Usefulness	3	.907

According to the results, the Cronbach's alpha values of the constructs ranged between 0.570 and 0.945. The reliability of "Continuance Intention", "Satisfaction", "Confirmation" and "Perceived Usefulness" was high with Cronbach's alpha values as in turn, 0.945, 0.936, 0.940 and 0.907. The reliability values of the constructs were above 0.7 except for "Facilitating Conditions".

As displayed in Table 12, Cronbach's alpha value for "Facilitating Conditions" was calculated as 0.570 which is lower than 0.7. In this regard, the reliability statistics of that construct with Cronbach's alpha if item deleted was examined and presented in Table 13.

Table 13: Reliability Statistics for Facilitating Conditions Construct

	Cronbach's alpha	**Item**	**Cronbach's alpha if item deleted**
FC	0.570	FC1	.170
		FC2	.571
		FC3	**.605**

As seen from Table 13, when FC3 is removed, the reliability of "Facilitating Conditions" construct increases to 0.605. Similarly, Cronbach's alpha if item deleted values are calculated to investigate whether the reliability can be increased. The reliability statistics of the constructs with Cronbach's alpha if item deleted values are presented in Table 14. As can be inferred from the table, if FC3 is deleted, the overall reliability increases slightly.

Table 14: Reliability Statistics if Items Deleted

Construct	**Constructs' Cronbach's alpha**	**Item**	**Overall Cronbach's alpha if Item Deleted**
HA	.837	HA1	.960
		HA2	.958
		HA3	.959
AT	.798	AT1	.959
		AT2	.960
		AT3	.958
FC	.570	FC1	.961
		FC2	.962
		FC3	**.963**
PEOU	.830	PEOU1	.960
		PEOU2	.960
		PEOU3	.960
CI	.945	CI1	.958
		CI2	.958
		CI3	.958
S	.936	S1	.958
		S2	.958
		S3	.958
C	.940	C1	.958
		C2	.958
		C3	.958
PU	.907	PU1	.957
		PU2	.957
		PU3	.958

As a result, FC3 was removed from the item set. Cronbach's alpha value of the "Facilitating Conditions" factor increased to 0.605 and overall reliability value increased to 0.963.

Consequently, for reliability analysis, Cronbach's alpha values of "Habit", "Attitude", "Perceived Ease of Use" "Continuance Intention", "Satisfaction", "Confirmation" and "Perceived Usefulness" were above 0.7, which indicates that they satisfy the reliability requirement. However, Cronbach's alpha value for "Facilitating Conditions" was initially calculated as 0.570. To increase the reliability of "Facilitating Conditions", Cronbach's alpha value if the item deleted was calculated to decide which item can be eliminated to increase the reliability of the construct. By removing FC3 from the item set, Cronbach's alpha value the "Facilitating Conditions" is increased to 0.605. Although an alpha value of 0.7 or higher is generally regarded as a threshold for acceptable reliability, particularly exploratory research involving the development and testing of new scales, may accept values between 0.6 and 0.7 (Nunnally, 1994).

Table 15: Finalized Reliability Statistics in SPSS

Cronbach's alpha	Cronbach's alpha Based on Standardized Items	N of items
.963	.963	23

Therefore, after the removal of FC3, the construct of "Facilitating Conditions" satisfied the reliability requirement. The finalized overall reliability statistics are presented in Table 15.

5.4. Exploratory Factor Analysis

According to Fabrigar and Wegener (2011), EFA is preferred when the research aims to uncover latent constructs for theory development or to design measurement tools that reflect meaningful underlying constructs. More specifically, EFA is a statistical method that identifies the least number of underlying constructs (factors) explaining the pattern of correlations among a set of measured (observed) variables (Fabrigar & Wegener, 2011). Therefore, EFA was used to identify the clusters of items that measure the same underlying constructs. EFA was executed by using IBM SPSS Software (version 29). Several steps were followed to perform EFA (Fabrigar et al., 1999).

Initially, the measured variables were specified as a result of a comprehensive literature review, and the items were retrieved from the existing continuance intention literature. Moreover, to conduct EFA, the participants should logically align with the constructs being measured. The participants were selected from Agile practitioners, representing the targeted population. That is, the participants of the study were appropriately aligned with the constructs being measured.

In order to perform EFA, adequacy of the sampling should also be ensured. Sampling adequacy assures that the data sample is adequate to reliably identify and interpret underlying factors from the observed variables. Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were applied to check sampling adequacy. KMO value ranges from 0 to 1 and greater than 0.50 is considered as suitable (Hair et al., 1995). As presented in Table 16, the KMO value for the present study is calculated as 0.919 which indicates a strong sampling adequacy.

In addition, the Bartlett's test of sphericity should be significant ($p<.05$) in order to proceed to factor analysis (Hair et al., 1995; Tabachnick & Fidell, 2013). As seen in Table 16, p-value for Bartlett's test was significant which indicates the appropriateness of the observed data for the factor analysis.

Table 16: KMO and Bartlett's Test Results of EFA

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.919
Bartlett's Test of Sphericity	Approx. Chi-Square	2086.309
	df	253
	Sig	.000

Following to ensuring the adequacy of the sampling with Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity, EFA was performed. Analyze method was selected as correlation matrix to illustrate the relationship between individual variables. Principal axis factoring method was selected as factor extraction method. The purpose of data extraction is to simplify a large set of items into a smaller number of factors. Principal axis factoring addresses the common variance among the items, thereby emphasizing the underlying latent factor (Henson & Roberts, 2006). Another aspect to consider when determining the number of factors to analyze is whether a variable might be related with more than one factor. Rotation enhances high item loadings and reduces low item loadings, resulting in a more interpretable and streamlined solution (Williams et al., 2010). Varimax rotation option was selected and Kaiser normalization was applied.

According to SPSS results of EFA, 4 factors were explained out of 8 factors. In addition, these 4 factors explain the 69.88% of the total variance which is conveniently acceptable (Hair et al., 2019).

Table 17: EFA - Rotated Factor Matrix - Version 1

Rotated Factor Matrix[a]				
	Factor			
	1	2	3	4
HA1				.514
HA2		**.573**		
HA3				.751
AT1		.570		
AT2	**.587**			
AT3		.584		
FC1			.490	
FC2			.728	
PEOU1			.730	
PEOU2			.677	
PEOU3			.611	
CI1		.784		
CI2		.750		
CI3		.819		
S1		.635		
S2		.669		
S3		.600		
C1	.763			
C2	.813			
C3	.808			
PU1	.796			
PU2	.807			
PU3	.555			

Extraction Method: Principal Axis Factoring
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Moreover, Rotated Factor Matrix was examined to interpret item loadings and is provided in Table 17. In the Rotated Factor Matrix, factor loadings should be greater than 0.4 to ensure significant representation of the items within factors (Tabachnick & Fidell, 2013). In the resulting Rotated Factor Matrix displayed in Table 17, the item loadings are greater than 0.40. In addition, it is seen that items measuring FC and PEOU loaded to same factor. The same applies for items measuring CI-S and C-PU.

On the other hand, although HA1 and HA3 loaded to same factor, HA2 loaded to a factor different from HA1 and HA3. Because of that, HA2 is removed and Rotated Factor Matrix recalculated as displayed in Table 18. Total variance explained by the four factors increased to 69.91%.

Table 18: EFA - Rotated Factor Matrix - Version 2

Rotated Factor Matrix[a]				
	Factor			
	1	2	3	4
HA1				.641
HA3				.646
AT1		.566		
AT2	**.589**			
AT3		.587		
FC1			.477	
FC2			.696	
PEOU1			.730	
PEOU2			.717	
PEOU3			.635	
CI1		.780		
CI2		.757		
CI3		.829		
S1		.609		
S2		.650		
S3		.594		
C1	.768			
C2	.823			
C3	.801			
PU1	.794			
PU2	.805			
PU3	.550			

Extraction Method: Principal Axis Factoring
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Similarly, although AT1 and AT3 loaded to same factor, AT2 loaded to a factor different from them. Therefore, AT2 is removed and Rotated Factor Matrix recalculated as displayed in Table 19. Total variance explained by the four factors increased to 70.97% meaning a better explanation of the total variance by these four factors.

Table 19: EFA - Rotated Factor Matrix - Version 3

Rotated Factor Matrix[a]				
	Factor			
	1	2	3	4
HA1				.644
HA3				.650
AT1		.585		
AT3		.608		
FC1			.460	
FC2			.674	
PEOU1			.730	
PEOU2			.729	
PEOU3			.635	
CI1		.791		
CI2		.771		
CI3		.840		
S1		.623		
S2		.668		
S3		.615		
C1	.758			
C2	.804			
C3	.804			
PU1	.795			
PU2	.794			
PU3	.536			

Extraction Method: Principal Axis Factoring
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.

Finally, as can be seen in Table 19, after removal of the items HA2 and AT2, all items intending to measure same construct are loaded to same factors with higher than 0.40 item loading. Thus, EFA is finalized and proceeded to CFA.

5.5. Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) is a method to examine the hypothesized relationship between observed variables and their underlying constructs (Hair et al., 2020). It involves developing measurement models within the Structured Equation Modeling (SEM) to ensure validity of measurement instruments (Floyd & Widaman, 1995). Additionally, implementing checks for convergent and discriminant validity (components of construct validity) are integral parts of CFA.

Convergent validity refers to the extent to which various measures of the same construct are correlated or converge with one another. Factor loadings, Composite Reliability (CR) and Average Variance Extracted (AVE) values were examined to evaluate convergent validity. Hair and colleagues (2013) stated that all standardized factor loadings should be no less than 0.5 and, preferably, at least 0.7. Factor loadings were calculated by using SmartPLS, where it is given as outer loading measure. As seen in Table 20, the smallest factor loading value is 0.754 which is greater than threshold value.

Table 20: Factor Loadings

	AT	C	CI	FC	PEOU	PU	S	HA
AT1	0.894							
AT3	0.922							
C1		0.940						
C2		0.945						
C3		0.950						
CI1			0.942					
CI2			0.947					
CI3			0.960					
FC1				0.924				
FC2				0.754				
PEOU1					0.853			
PEOU2					0.868			
PEOU3					0.877			
PU1						0.956		
PU2						0.938		
PU3						0.859		
S1							0.927	
S2							0.961	
S3							0.937	
HA1								0.909
HA3								0.929

Composite Reliability (CR) ranges from 0 to 1, with values above 0.6 considered acceptable for exploratory studies and values above 0.7 deemed adequate for confirmatory studies (Chin & Marcoulides, 1998; Henseler et al., 2012). As shown in Table 21, Composite Reliability values of the all constructs are greater than 0.7 meaning that they are satisfying the composite reliability requirement.

Average Variance Extracted (AVE) value was used to evaluate how much of the variance a construct explains relative to the variance due to measurement error. More specifically, the AVE value reflects the average variance common between the construct and its specific items (Hair et al., 2020). The AVE values should be greater than or equal to 0.5 (Segars, 1997). As shown in Table 21, the AVE values of the constructs are greater than the threshold value of 0.5 which satisfies the requirement for this metric.

Therefore, it can be concluded that convergent validity has been achieved.

Table 21: CR and AVE Values

	Composite Reliability (CR)	**Average Variance Extracted (AVE)**
HA	0.916	0.844
AT	0.904	0.825
FC	0.830	0.711
PEOU	0.900	0.750
CI	0.965	0.902
S	0.959	0.887
C	0.961	0.893
PU	0.942	0.844

Discriminant validity assures that a construct is distinct from other constructs in a structural equation model (Hair et al., 2013). Fornell–Larcker's criterion was applied to assess discriminant validity. This criterion states that the square root of a construct's AVE should exceed its correlation with any other constructs (Fornell & Larcker, 1981).

Table 22: Fornell–Larcker's Criterion Results

	AT	C	CI	FC	PEOU	PU	S	HA
AT	0.908							
C	0.727	0.945						
CI	0.796	0.685	0.950					
FC	0.373	0.327	0.357	0.843				
PEOU	0.571	0.537	0.523	0.575	0.866			
PU	0.755	0.885	0.689	0.447	0.593	0.919		
S	0.759	0.769	0.793	0.457	0.548	0.788	0.942	
HA	0.522	0.537	0.611	0.480	0.568	0.608	0.536	0.919

As seen from Table 22, the square root of each construct's AVE higher than the correlations with all other latent constructs. Therefore, it can be said that the criterion for discriminant validity is established.

If a model fails to fit the data, it indicates that the data contains additional information beyond what the model captures. As a result, the estimates derived from the model may lack meaningfulness, raising doubts about the conclusions drawn from them (Henseler et al., 2016). In that regard, goodness-of-fit of the model was investigated to analyze how well the model fits the data. Tenenhaus and colleagues' (2004) goodness-of-fit measure was calculated. According to this measure, the square root of the product of average AVE values and average R^2 values belonging the constructs were calculated (see Table 23).

Table 23: Goodness of Fit Results

	Average Variance Extracted (AVE)	**R^2**
HA	0.844	
AT	0.825	
FC	0.711	
PEOU	0.750	
CI	0.902	0.752
S	0.887	0.645
C	0.893	
PU	0.844	0.782
Average	0.832	0.727
Goodness of fit	**0.778**	

For the model, the goodness-of-fit measure was calculated as 0.778 which surpasses the cut-off value of 0.36 (Wetzels & Odekerken, 2009) meaning that the model highly fits the data. The average R^2 value of 0.727 indicates that the model explains 72.7% of the fitted data in the regression model.

5.6. Structural Equation Modeling

After obtaining the results and ensuring reliability and validity (through EFA and CFA), path coefficients were analyzed to confirm the proposed model structure. PLS-SEM analysis was performed to understand the relationships among the constructs and test the proposed hypotheses. SmartPLS 4 was utilized to validate the structural model.

Initially, path analysis was exercised to test the research hypotheses. The data were imported to SmartPLS 4 and the model was drawn. After that, bias corrected and accelerated bootstrapping algorithm with 5000 subsamples was run with two-tailed test in significance level of 0.05. The coefficient of determination (R^2) was evaluated to assess the explanatory power of the model. R^2 values up to 0.25 are regarded as weak, values up to 0.50 are regarded as moderate, and values up to 0.75 are regarded as substantial (Henseler et al., 2009). The coefficient of determination (R^2) for Continuance Intention was calculated as 0.752 which can be regarded substantial.

The relationship between latent variables in a structural model called as path coefficients. Structural path coefficients indicate the relationships between factors, with higher coefficients signifying stronger connections between latent variables. Path analysis and bootstrapping results are given in Table 24 including path coefficients, T statistics, p-values.

Table 24: Path Analysis and Bootstrapping Algorithm Results

Hypothesis	Path	Path Coefficient	T statistics	p-values	Status
H1	C→S	0.329	2.196	0.028	Supported
H2	C→PU	0.885	33.792	0.000	Supported
H3	PU→S	0.498	3.649	0.000	Supported
H4	PU→CI	-0.114	0.922	0.357	**Not Supported**
H5	S→CI	0.455	4.496	0.000	Supported
H6	PEOU→CI	-0.004	0.041	0.967	**Not Supported**
H7	HA→CI	0.247	3.252	0.001	Supported
H8	AT→CI	0.440	4.705	0.000	Supported
H9	FC→CI	-0.080	0.975	0.330	**Not Supported**

While evaluating the results of the path analysis, path coefficients greater than 0.1 and T statistics greater than 1.96 at $p<0.05$ are regarded as statistically significant relationship in the structural model (Hair et al., 2014). Consequently, it is seen that H1, H2, H3, H5, H7, H8 are supported where H4, H6 and H9 are not supported.

Agile Continuance Intention Model with path coefficients and R^2 values is provided in Figure 23.

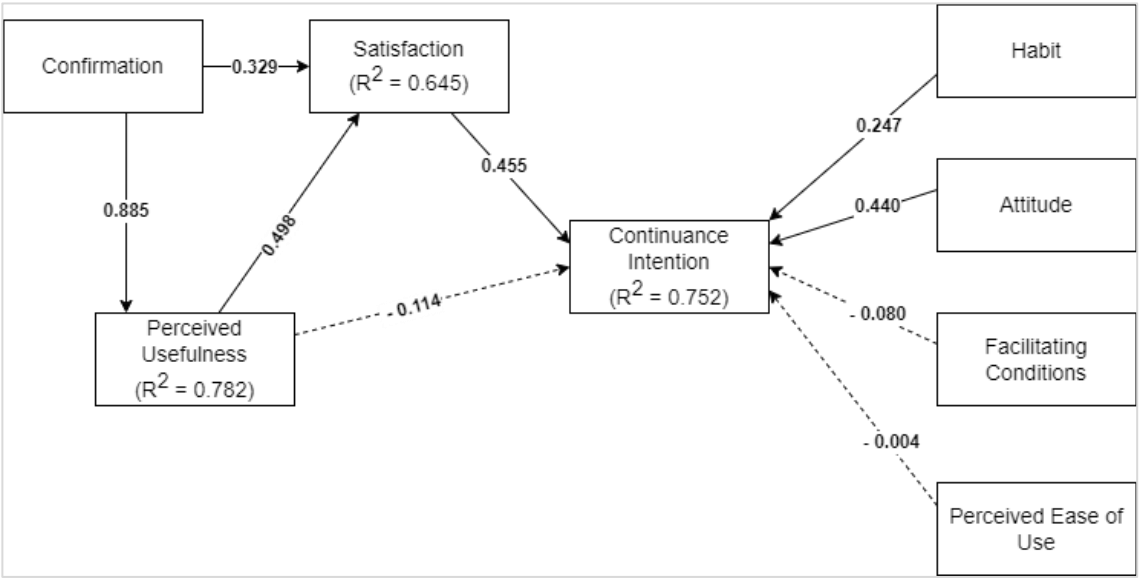

Figure 23: Agile Methodology Continuance Intention Model

It is seen that Perceived Ease of Use, Perceived Usefulness and Facilitating Conditions do not have a significant direct effect on practitioners' Agile methodology continuance intention. Moreover, all hypotheses from the ECM were confirmed to have significant p-values for their path coefficients, except for the relationship from Perceived Usefulness to Continuance Intention (H4). In addition, from additional factors, Habit and Attitude were found to have a significant direct effect on practitioners' continuance intention towards Agile methodology usage.

5.7. Revision of Proposed Model

In this section, final revisions were made in order to confirm the proposed model. To revise the model, an iterative process was carried out. New relations were investigated and the model was observed whether any improvements occurred in terms of the significance of the path coefficients and the coefficient of determination (R^2). To this end, additional potential direct and indirect relationships in the model were examined systematically.

As stated, the model was drawn by adding new relationships among the constructs. Then, similar to previously done, bias corrected and accelerated bootstrapping algorithm with 5000 subsamples was run with two-tailed test in significance level of 0.05. The revision process of the initial model involved adding and removing relationships between the factors in the model. Significant relationships identified through bootstrapping were retained, while insignificant ones were discarded.

Table 25: Recalculated Path Analysis and Bootstrapping Results

Hypothesis	Path	Path Coefficient	T statistics	p-values	Status
H1	C→S	0.329	2.201	0.028	Significant
H2	C→PU	0.884	33.822	0.000	Significant
H3	PU→S	0.497	3.651	0.000	Significant
H4	PU→CI	-0.117	0.932	0.351	**Not Significant**
H5	S→CI	0.453	4.454	0.000	Significant
H6	PEOU→CI	-0.002	0.019	0.985	**Not Significant**
H7	HA→CI	0.244	3.208	0.001	Significant
H8	AT→CI	0.438	4.725	0.000	Significant
H9	FC→CI	-0.070	0.860	0.390	**Not Significant**
NEW	PU→AT	0.757	17.370	0.000	Significant
NEW	FC→PEOU	0.432	4.734	0.000	Significant
NEW	PU →HA	0.417	3.700	0.000	Significant
NEW	PEOU→HA	0.323	3.285	0.001	Significant
NEW	PU→PEOU	0.410	5.698	0.000	Significant

Recalculated Path Analysis and Bootstrapping Results are shown in Table 25. As can be seen, path coefficients for the newly added relationships were identified as statistically significant at significance level of 0.05. Moreover, significant specific indirect effects in the proposed model are given in Table 26.

Table 26: Significant Specific Indirect Effects in the Proposed Model

Path	Path Coefficient	T statistics	p-values	Status
PU→S→CI	0.225	3.178	0.001	Significant
PU→AT→CI	0.331	4.663	0.000	Significant
C→PU→AT→CI	0.293	4.607	0.000	Significant
C→PU→S→CI	0.199	3.160	0.002	Significant
PU→HA→CI	0.102	2.654	0.008	Significant

As can be inferred from Table 26, Although Perceived Usefulness does not have a significant direct effect on practitioners' Agile methodology continuance intention, its indirect effect was identified through Satisfaction and also newly identified relationships in the model. The final version of proposed model with path coefficients and coefficients of determination (R^2) is presented in Figure 24.

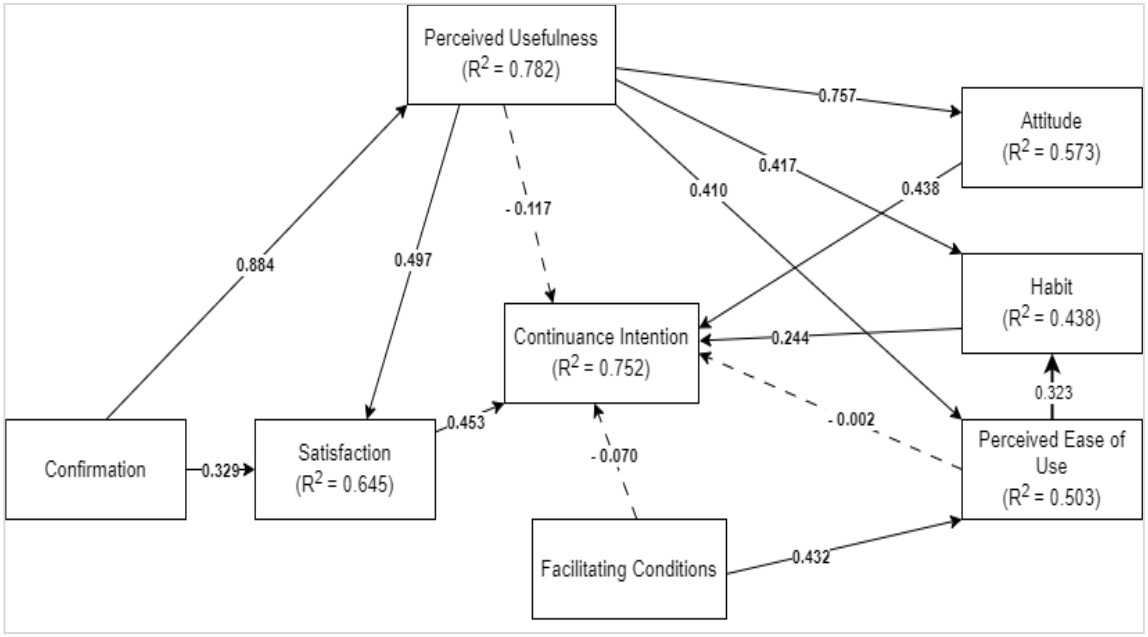

Figure 24: Agile Methodology Continuance Intention Model – Final Version

Although the coefficient of determination (R^2) for CI, PU and S remained the same, the model reveals more relationships. The final coefficient of determination (R^2) values are provided in Table 27 below.

Table 27: R^2 Values for the Final Model

Construct	R^2
CI	**0.752**
PU	0.782
S	0.645
PEOU	0.503
HA	0.438
AT	0.573

The data analysis showed that the proposed model has good explanatory power (R^2: 75.2% Continuance Intention; 78.2% Perceived Usefulness, 64.5% Satisfaction; 50.3% Perceived Ease of Use; 43.8% Habit; 47.3% Attitude) with six out of nine hypotheses supported.

The results can be interpreted as follows:

Confirmation (*path coef.* = 0.329, *p* = 0.028) has a positive effect on practitioners' Satisfaction toward Agile methodology usage (H1).

Confirmation (*path coef.* = 0.884, *p* = 0.000) has a positive effect on practitioners' Perceived Usefulness toward Agile methodology usage (H2).

Perceived Usefulness (*path coef.* = 0.497, *p* = 0.000) has a positive effect on practitioners' Satisfaction toward Agile methodology usage (H3).

Perceived Usefulness (*path coef.* = -0.117, *p* = 0.351) has not a positive effect on practitioners' Continuance Intention toward Agile methodology usage (H4).

Satisfaction (*path coef.* = 0.453, *p* = 0.000) has significant positive effect on practitioners' Continuance Intention toward Agile methodology usage (H5).

Perceived Ease of Use (*path coef.* =-0.002, *p* = 0.985) has not a positive effect on practitioners' Continuance Intention toward Agile methodology usage (H6).

Habit (*path coef.* = 0.244, *p* = 0.001) has significant positive effect on practitioners' Continuance Intention toward Agile methodology usage (H7).

Attitude (*path coef.* = 0.438, *p*= 0.000) has significant positive effect on practitioners' Continuance Intention toward Agile methodology usage (H8).

Facilitating Conditions (*path coef.* =-0.070, p = 0.390) has not a positive effect on practitioners' Continuance Intention toward Agile methodology usage (H9).

In conclusion, while six hypotheses were found as statistically significant, three hypotheses were not found statistically significant in the context of present thesis study. Additionally, new relations were identified through examination of path analysis results. The implications and details of the results are discussed in the following section.

CHAPTER 6

DISCUSSION

In this thesis study, practitioners' continuance intention towards Agile methodology usage was investigated by building upon Expectation Confirmation Model (ECM) of Bhattacherjee (2001). ECM is a widely used model for understanding users' continuance intention. The model highlights three key factors influencing continued intention: Confirmation, Perceived Usefulness, and Satisfaction (Bhattacherjee, 2001). In the scope of present study, the effects of the additional constructs Perceived Ease of Use, Facilitating Conditions, Habit and Attitude on practitioners' continuance intention toward Agile methodology usage were investigated to propose a comprehensive continuance intention model in Agile methodology context. As a result, nine hypotheses were tested in the proposed model.

The path relationships between the constructs included in the proposed model were examined thoroughly, and also additional significant relationships were discovered during the path analysis. The proposed model with these relationships, along with their respective hypotheses and the results indicating whether they were supported are displayed in Table 28.

Table 28: Hypotheses and Results of the Proposed Model

	Path	**Hypothesis**	**Result**
H1	C→S	Confirmation has a positive effect on practitioners' Satisfaction toward Agile methodology usage.	Supported
H2	C→PU	Confirmation has a positive effect on practitioners' Perceived Usefulness toward Agile methodology usage.	Supported
H3	PU→S	Perceived Usefulness has a positive effect on practitioners' Satisfaction toward Agile methodology usage.	Supported
H4	PU→CI	Perceived Usefulness has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.	**Not Supported**
H5	S→CI	Satisfaction has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.	Supported

Table 28 (cont.)

H6	PEOU→CI	Perceived Ease of Use has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.	**Not Supported**
H7	HA→CI	Habit has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.	Supported
H8	AT→CI	Attitude has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.	Supported
H9	FC→CI	Facilitating Conditions have a positive effect on practitioners' Continuance Intention toward Agile methodology usage.	**Not Supported**
NEW	PU→AT	Perceived Usefulness has a positive effect on practitioners' Attitude toward Agile methodology usage.	Supported
NEW	FC→PEOU	Facilitating Conditions has a positive effect on practitioners' Perceived Ease of Use toward Agile methodology usage.	Supported
NEW	PU →HA	Perceived Usefulness has a positive effect on practitioners' Habit toward Agile methodology usage.	Supported
NEW	PEOU→HA	Perceived Ease of Use has a positive effect on practitioners' Habit toward Agile methodology usage.	Supported
NEW	PU→PEOU	Perceived Usefulness has a positive effect on practitioners' Perceived Ease of Use toward Agile methodology usage.	Supported

As stated earlier, in addition to additional constructs, the relationships proposed by the ECM with its constructs were analyzed. In the following subsections the results were discussed based on the constructs included in the proposed model.

6.1. Confirmation

Confirmation is defined in the present research context as users' perceptions of the alignment between anticipated and actual performance of Agile methodology usage (Bhattacherjee, 2001). In the current study, two hypotheses were proposed related to Confirmation. The hypotheses and their results related to Confirmation are presented in Table 29.

Table 29: Hypotheses and Results Regarding Confirmation

	Path	**Related Hypothesis**	**Result**
H1	C→S	Confirmation has a positive effect on practitioners' Satisfaction toward Agile methodology usage.	Supported
H2	C→PU	Confirmation has a positive effect on practitioners' Perceived Usefulness toward Agile methodology usage.	Supported

Hypothesis 1 suggests that Confirmation has a positive effect on practitioners' Satisfaction toward Agile methodology usage, while Hypothesis 2 suggested that Confirmation has a positive effect on practitioners' Perceived Usefulness toward Agile methodology usage. According to path analysis results, it is found that Confirmation has a significant positive effect on Perceived Usefulness (*path coef.* = 0.884, p = 0.000), and Satisfaction (*path coef.* = 0.329, p = 0.028), indicating that correspondance between Agile practitioners' expectation and actual experience leads them to perceive the Agile methodology as useful and satisfactory. More precisely, practitioners' confirmation indicates that they achieved the anticipated benefits from their experiences with the Agile methodology, which in turn positively influences Perceived Usefulness and Satisfaction toward Agile methodology. The finding of the study is in parallel with the finding of ECM and the studies reporting the confirmation's positive effect on Perceived Usefulness and Satisfaction (Bhattacherjee, 2001; Mamakou, 2023; Thong et al., 2006).

6.2. Perceived Usefulness

Perceived Usefulness defined in the present study context as practitioners' perception regarding the anticipated benefits of Agile methodology usage (Bhattacherjee, 2001). The hypotheses and their results concerning Perceived Usefulness are displayed in Table 30.

Table 30: Hypotheses and Results Regarding Perceived Usefulness

	Path	Related Hypothesis	Result
H3	PU→S	Perceived Usefulness has a positive effect on practitioners' Satisfaction toward Agile methodology usage.	Supported
H4	PU→CI	Perceived Usefulness has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.	Not Supported
NEW	PU→AT	Perceived Usefulness has a positive effect on practitioners' Attitude toward Agile methodology usage.	Supported
NEW	PU →HA	Perceived Usefulness has a positive effect on practitioners' Habit toward Agile methodology usage.	Supported
NEW	PU→PEOU	Perceived Usefulness has a positive effect on practitioners' Perceived Ease of Use toward Agile methodology usage.	Supported

Hypothesis 3 suggests that Perceived Usefulness has a positive effect on practitioners' Satisfaction toward Agile methodology usage. In other words, practitioners will be satisfied with Agile methodology usage, if they perceive that methodology as useful. The findings of the study confirm Hypothesis 3 and concludes that the more practitioners perceive Agile methodology useful, the more their Satisfaction towards Agile methodology usage increases (*path coef.* = 0.497, p = 0.000). Put differently, practitioners who perceive that Agile methodology improves their ability to perform tasks effectively and efficiently tend to become satisfied from its usage. This finding of the study is

compatible with the findings of the ECM and the various studies in the literature (Ashfaq et al., 2020; Bhattacherjee, 2001; Mamakou, 2023).

In addition, it is shown that path of Perceive Usefulness to Satisfaction and Satisfaction to Continuance Intention was also significant (*path coef.* = 0.225, p = 0.001) (see Table 26). Therefore, it can be inferred that Perceived Usefulness of Agile methodology affects practitioners' Continuance Intention indirectly.

Hypothesis 4 suggests that Perceived Usefulness has a positive effect on practitioners' Continuance Intention toward Agile methodology usage. Although ECM and various studies confirm this hypothesis (Bhattacherjee, 2001; Bhattacherjee & Lin, 2015; P. Cheng et al., 2019; Hong et al., 2011; Mamakou, 2023; Thong et al., 2006; Wu & Chen, 2017), the direct effect of Perceived Usefulness of Agile methodology usage on practitioners' Continuance Intention was not supported by the path analysis results (*path coef.* = - 0.117, p = 0.351) of the present study.

Moreover, with the newly added hypothesis during the revision of the proposed model, a significant relationship between Perceived Usefulness and Attitude was discovered (*path coef.* = 0.757, p = 0.000). This relationship also acquired support from the studies from the literature (Cheng et al., 2019; Ifinedo, 2017; Lee et al., 2013; Wu & Chen, 2017) demonstrating the positive effect of Perceived Usefulness on Attitude. Therefore, it can be inferred from the study that practitioners will exhibit positive attitudes toward Agile methodology usage when they have experienced its tangible and evident benefits. Additionally, the indirect effect of Perceived Usefulness on Continuance Intention through Attitude is identified in the scope of the present study (*path coef.* = 0.331, p = 0.000) (see Table 26).

Furthermore, a significant relationship between Perceived Usefulness and Habit is identified during the revision of the proposed model (*path coef.* = 0.417, p = 0.000). This finding of the study indicates that practices that are perceived as useful are tend to become habit for the Agile practitioners. In addition, the indirect effect of Perceived Usefulness on Continuance Intention is identified through Habit (*path coef.* = 0.102, p = 0.008) (see Table 26). In the context of Agile methodology, this would be reflected on that as teams and individual users tend to find Agile methodology useful, which enable practitioners to form a habitual behavior towards Agile methodology usage and therefore continue using it.

Lastly, the relationship between Perceived Usefulness and Perceived Ease of Use is analyzed and a statistically significant relationship was found during the path analysis (*path coef.* = 0.410, p = 0.000). However, specific indirect effect from Perceived Usefulness to Continuance Intention through Perceived Ease of Use was not statistically significant. It can be inferred from this result that as Agile methodology is perceived as useful, the practitioners tend to invest more into it, which results in finding it easier to use as well. Put differently, as Agile practitioners find Agile methodology usage beneficial, they would expertise on it and consequently believe using Agile methodology is more

effortless. However, this relationship does not affect practitioners' intention to continue using Agile methodology.

6.3. Satisfaction

The research hypothesis and its result concerning Satisfaction is provided in Table 31.

Table 31: Hypothesis and Result Regarding Satisfaction

	Path	Related Hypothesis	Result
H5	S→CI	Satisfaction has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.	Supported

Hypothesis 5 suggests that Satisfaction has a positive effect on practitioners' Continuance Intention toward Agile methodology. The results of the study confirm this hypothesis (*path coef.* = 0.453, p = 0.000), meaning that if the practitioners are satisfied with the Agile methodology usage, they will be more likely to continue using Agile methodology. Therefore, high satisfaction with Agile methodology significantly enhances the likelihood that Agile teams will maintain benefitting from its usage in their projects. Similarly, Bhattacherjee (2001) stated that satisfaction strongly predicts users' Continuance Intention. In parallel with the findings of the present study and Bhattacherjee (2001), a substantial body of research supports the significant effect of Satisfaction on users' Continuance Intention (Ashfaq et al., 2020; Bhattacherjee & Lin, 2015; Chen et al., 2018; Hsiao et al., 2016; Joo et al., 2017; Mamakou, 2023; Mellikeche et al., 2020; Thong et al., 2006).

6.4. Perceived Ease of Use

Perceived Ease of Use is defined as the extent to which the practitioners believe using Agile methodology is free of effort (Davis, 1989). When an individual considers that learning and using Agile methodology will take less time and effort, its perceived ease of use increases. The research hypotheses and their results relating Perceived Ease of Use are given in Table 32.

Table 32: Hypotheses and Results Regarding Perceived Ease of Use

	Path	Related Hypothesis	Result
H6	PEOU→CI	Perceived ease of use has a positive effect on practitioners' Continuance Intention toward Agile methodology usage.	Not Supported
NEW	PEOU→HA	Perceived ease of use has a positive effect on practitioners' Habit toward Agile methodology usage.	Supported

According to Hypothesis 6, Perceived Ease of Use of Agile methodology positively affects practitioners' Continuance Intention toward using it. This hypothesis was not supported by the path analysis results (*path coef.* = -0.002, p = 0.985) of the present study. In addition, there are studies supporting this finding of the present study by stating that Perceived Ease of Use has no significant direct effect on Continuance Intention (Cheng et al., 2019; Hong et al., 2011).

In addition, with the newly added hypothesis during the revision of the proposed model, a significant relationship between Perceived Ease of Use and Habit was identified (*path coef.* = 0.323, p = 0.001). This result indicates that practitioners whom find Agile methodology easy to use are tend to form habitual behavior towards using Agile methodology. However, specific indirect effect from Perceived Ease of Use to Continuance Intention through Habit was not statistically significant.

6.5. Habit

Habit can be explained in the present study context as the degree to which practitioners tend to automatically continue using Agile methodology (Limayem et al., 2007). The research hypothesis and its result concerning Habit is presented in Table 33.

Table 33: Hypothesis and Result Regarding Habit

	Path	**Related Hypothesis**	**Result**
H7	HA→CI	Habit has a positive effect on practitioners' continuance intention toward Agile methodology usage.	Supported

Hypothesis 7 investigates whether Habit positively influence practitioners' Continuance Intention toward Agile methodology usage. The path analysis results of the study confirm this hypothesis (*path coef.* = 0.244, p = 0.001), implying that Habit has a positive effect on practitioners' Agile methodology continuance intention. It can be inferred from the result that Habit is a factor that strengthens practitioners' intention to continue using Agile methodology once its usage becomes habitual. In a similar vein, previous studies found that when the use of an IS turns into a routine, the habit has the potential to enhance the intention to continue using the IS (Alalwan, 2020; Chen et al., 2018; Gefen, 2003).

6.6. Attitude

In the present study context, Attitude is defined as the extend of the practitioners' positive or negative assessment towards Agile methodology usage (Fishbein & Ajzen, 1975). The research hypothesis and its result concerning Attitude is presented in Table 34.

Table 34: Hypothesis and Result Regarding Attitude

	Path	Related Hypothesis	Result
H8	AT→CI	Attitude has a positive effect on practitioners' continuance intention toward Agile methodology usage.	Supported

According to Hypothesis 8, Attitude positively influences practitioners' Continuance Intention toward Agile methodology usage. The path analysis result shows a statistically significant relationship between Agile practitioners' Attitude and their Continuance Intention towards Agile methodology usage (*path coef.* =0.438, p = 0.000). This means that practitioners who display a positive attitude towards using Agile methodology are tend to continue using it. This finding of the study is compatible with the findings of the studies in the literature (Cheng et al., 2019; Ifinedo, 2017; Wu & Chen, 2017) demonstrating the positive effect of Attitude on Continuance Intention.

6.7. Facilitating Conditions

Facilitating Conditions defined in the present study context as the extent to which a person perceives the presence of organizational and technical infrastructure to facilitate the implementation of Agile methodology (Venkatesh et al., 2003). The research hypotheses and their results concerning Facilitating Conditions are presented in Table 35.

Table 35: Hypotheses and Results Regarding Facilitating Conditions

	Path	Related Hypothesis	Result
H9	FC→CI	Facilitating Conditions have a positive effect on practitioners' Continuance Intention toward Agile methodology usage.	Not Supported
NEW	FC→PEOU	Facilitating Conditions has a positive effect on practitioners' Perceived Ease of Use toward Agile methodology usage.	Supported

According to Hypothesis 9, Facilitating Conditions positively affects practitioners' Continuance Intention toward Agile methodology usage, which means that if the organizational and technical infrastructure enables Agile practitioners to use and apply practices of Agile methodology, they become more prone to continue using it. In addition, studies support this hypothesis by stating that Facilitating Conditions significantly predicts Continuance Intention (Alalwan, 2020). However, the result of the path analysis contradicts with the hypothesis that Facilitating Conditions would influence practitioners' Continuance Intention of Agile methodology usage (*path coef.* = -0.070, p = 0.390). Therefore, the results of the path analysis did not support this hypothesis.

In addition, with the newly added hypothesis during the revision of the proposed model, a significant relationship between Facilitating Conditions and Perceived Ease of Use was identified (*path coef.* = 0.432, p = 0.000). This is an expected outcome as when there are

facilitating conditions for any system or methodology, it makes it easier to use. From our results, it can be deduced that this also holds true for Agile methodology. This can be exemplified with thinking about using a software, which helps with tracking issues. Users who have this software would find it easier to track the issues rather than the ones who have to track issues with other measures, which would reflect on their perception of how easy to use Agile methodology.

CHAPTER 7

CONCLUSION

Many organizations have embraced Agile methodologies due to their flexible approach to software development compared to traditional methodologies. As Agile practices become widespread, it is crucial to understand the factors influencing practitioners' intentions to continue using them. However, the scarcity of research on Agile methodology continuance intention is reported by the literature (Abrahamsson et al., 2009; Senapathi & Srinivasan, 2012). To this end, the present thesis study aimed to identify the factors influencing practitioners' intention to continue Agile methodology usage. The study also examined the influence of identified factors on Agile methodology continuance intention and proposed a model in the Agile methodology context.

Initially, a systematic literature review was performed to identify factors that influence continuance intention. After that, Delphi Analysis was implemented to seek expert opinions on filtering the factors for continuance intention. Then, a model was proposed with eight factors and nine hypotheses.

The research was designed and a cross-sectional survey was conducted to verify the model. As data collection instrument, an online questionnaire was designed composed of two parts. The first part was related to demographic information of the participants, and the second part consisted of 24 items to examine eight factors. The data were collected from 97 Agile practitioners working at different organizations using a convenience sampling method. After data collection, the reliability tests, Kaiser-Meyer-Olkin test, Bartlett's test of sphericity, Exploratory Factor Analysis, Confirmatory Factor Analysis, and PLS-SEM were executed.

Lastly, the Agile Methodology Continuance Intention Model was proposed, and it can be seen as the non-significant direct relationships removed in Figure 25. In the proposed model, Attitude, Habit and Satisfaction have a significant direct effect on Agile methodology Continuance Intention of practitioners. Additionally, it is seen that Confirmation and Perceived Usefulness have indirect significant effects on practitioners' Continuance Intention toward Agile methodology usage with various paths.

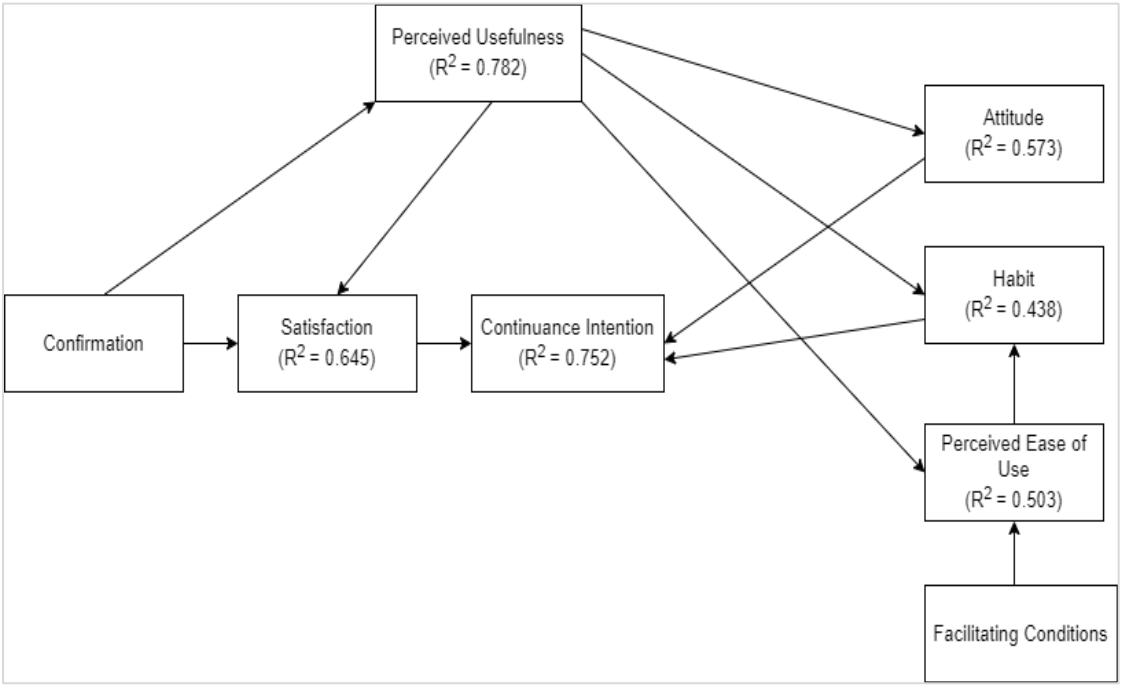

Figure 25: Proposed Agile Methodology Continuance Intention Model

In addition, the data analysis showed that the proposed model has good explanatory power (R^2: 75.2% Agile methodology Continuance Intention; 78.2% Perceived Usefulness, 64.5% Satisfaction; 50.3% Perceived Ease of Use; 43.8% Habit; 57.3% Attitude) with six out of nine hypotheses supported.

7.1. Implications for Research and Practice

The literature on the topic of continuance intention in Agile methodology usage is scarce. There is only a limited amount of resources. In that regard, the present thesis study provides a baseline model for further research on Agile methodology continuance intention. Additionally, the Expectation Confirmation Model is expanded in the scope of this study, showing that additional factors would help to describe continuance intention toward Agile methodology usage. Moreover, the proposed model can be adapted to other contexts, which can help guide other researchers in their continuance intention investigation of specific domains.

The present thesis study shows that Attitude, Habit, and Satisfaction positively affect Continuance Intention. Companies that plan to continue using Agile methodology should customize their training programs and support mechanisms so that their employees' Attitudes, Habits, and Satisfaction toward Agile methodology would improve, which would also affect their continuance intention for it. This would also help remove costs for companies not wanting to change their process management methodology.

7.2. Limitations of the Study

A limitation of this study is its cross-sectional design, which provides only a snapshot of practitioners' intentions and perceptions at one specific moment. As a result, it does not capture any potential changes in participants' responses over time.

Additionally, using an online questionnaire could introduce self-selection bias, as it relies on the voluntary participation of Agile practitioners who are willing and able to complete the survey. This could limit the representativeness of the sample and reduce the generalizability of the findings to the broader population of Agile practitioners.

Moreover, the relatively small sample size of the study may limit the generalizability of its findings.

Furthermore, the findings of the study are limited with the responses to items presented in the survey study.

7.3. Recommendations for Further Research

While this thesis study has supplied valuable information on the factors influencing the continuance intention towards Agile methodology usage, several questions still need to be studied and examined further. The following suggestions were made for future research:

Although this study mainly used a quantitative method, qualitative methods could be employed to thoroughly investigate the findings of the quantitative step and gain insights into the perceptions of Agile practitioners. Mixing qualitative and quantitative methods could provide a solid understanding of Agile methodology continuance intention.

The additional factors for the model were obtained as a result of a systematic literature review. The scope of the systematic literature review might be broadened by expanding the range of the publication years and increasing the variety of search databases for further studies.

Besides, the results of the study may vary across different industries. Therefore, industry-specific studies could be administered.

Additionally, in the present thesis study, a cross-sectional survey was utilized. This approach does not account for potential changes in the participants' responses over time. In that regard, longitudinal studies could be implemented to examine how the factors influencing Agile methodology continuance intention evolve over time.

Lastly, the study could be implemented in more extensive and diverse sample sizes by widening the number of Agile practitioners who joined the research. This might allow for more extensively relevant findings regarding the practitioners’ intention to continue using Agile methodology.

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APPENDICES

APPENDIX A

DELPHI INSTRUMENT IN TURKISH

BİLGİLENDİRME:

Bu çalışma, Orta Doğu Teknik Üniversitesi Yüksek Lisans Öğrencisi Tuğçe Vural tarafından Prof. Dr. Sevgi Özkan Yıldırım danışmanlığında yürütülen Çevik metodoloji uygulayıcılarının bu metodolojiyi kullanmaya devam etme niyetini etkileyen faktörleri belirlemeyi amaçlayan bir çalışmadır. Ayrıca belirlenen faktörlerin çevik metodoloji kullanım niyeti üzerindeki etkisini incelemeyi ve Çevik metodoloji bağlamında genişletilmiş bir model önermeyi hedeflemektedir.

Bu form, Çevik Metodoloji kullanıcılarının bu metodolojiyi kullanımını sürdürme niyetlerini etkileyen faktörleri ve etkilerini belirlemek amacıyla uzman görüşü almak ve fikir birliği sağlamak amacıyla oluşturulmuştur.

Bu çalışmadan elde edilen veriler sadece bu bilimsel çalışma için kullanılacak ve kimseyle paylaşılmayacaktır. Katılımcılar istedikleri zaman çalışmayı yarıda bırakıp ayrılabilirler.

Çalışma toplam iki turdan oluşmaktadır. Birinci tur bitiminde katılımcıların dönütleri analiz edilip sonuçları ikinci tur başlangıcında katılımcılar ile paylaşılacaktır. İkinci turda katılımcılardan birinci tur sonuçları eşliğinde sıralamayı tekrar yapmaları istenecektir.

Katılımınız için teşekkür ederiz.

Tuğçe Vural
Orta Doğu Teknik Üniversitesi
Bilişim Sistemleri Yüksek Lisans Öğrencisi

ÇALIŞMA:

Aşağıdaki tabloda tanımları ile birlikte listelenen, kullanıcıların Çevik Metodoloji kullanımı sürdürme niyetini etkileyen faktörleri önem derecesinin en yüksek olduğunu düşündüğünüz faktörden en düşük olduğunu düşündüğünüz faktöre 12'den 1'e kadar puan vererek sıralayınız. (12: kullanıcının Çevik Metodoloji kullanımı sürdürme niyetini etkileyen önem derecesi **en yüksek** faktör; 1: kullanıcının Çevik Metodoloji kullanımı sürdürme niyetini etkileyen önem derecesi **en düşük** faktör)

Faktör	**Tanımı**	**Önem Derecesi** 12: önem derecesi **en yüksek** faktör 1: önem derecesi **en düşük** faktör
Algılanan Eğlence	Beklenen herhangi bir performans sonucundan bağımsız olarak, bir kullanıcının Çevik Metodolojiyi kullanma etkinliğinden ne kadar keyif aldığı. (Davis, Bagozzi & Warshaw, 1992)	
Algılanan Kullanım Kolaylığı	Bir kişinin belirli bir sistemi kullanmanın çaba gerektirmeyeceğine ne ölçüde inandığı (Davis 1989, p.320)	
Alışkanlık	"Başlangıçta kasıtlı olarak öğrenilen, istikrarlı bir bağlamda çevresel ipuçları tarafından tetiklendiğinde, bilinçli bir niyet olmaksızın öğrenildiği gibi tekrarlanabilen eylem dizisi" (Ortiz de Guinea & Markus, 2009, p. 437).	
Tutum	Bir bireyin Çevik Metodoloji kullanımını olumlu veya olumsuz değerlendirme derecesi (Fishbein & Ajzen, 1975)	
Kalite	Çevik Metodolojinin kullanım kolaylığı, sistem esnekliği, sistem güvenilirliği ve öğrenme kolaylığı gibi istenen faydalı özellikleri (Petter, DeLone & McLean, 2008)	
Güven	Kullanıcının Çevik Metodolojiye yönelik psikolojik inancı ve güveni (Goyal, Venkatesh & Shi, 2022)	
Sosyal Etki	İnsanlar arasındaki etkileşim üzerindeki etkinin derecesi ve bir davranışı sergilemek (örneğin; Çevik Metodolojiyi kullanmak) için algılanan baskı (Rice & Aydin, 1991; Venkatesh & Brown, 2001)	
Algılanan Hedonik Değer	Kişinin, Çevik Metodolojiyi kullanmanın temel avantajının keyif almak olduğuna inanma derecesi (Dhar & Wertenbroch, 2000)	
Kişisel Yenilikçilik	Bir kişinin yeni bir metodolojiyle etkileşime girmeye ne ölçüde açık olduğu (Köchling, Wehner & Warkocz, 2022; Agarwal & Prasad, 1998)	
Kolaylaştırıcı Koşullar	Bir kişinin Çevik Metodolojinin uygulanmasını kolaylaştıracak kurumsal ve teknik altyapının varlığını ne ölçüde algıladığı. (Venkatesh, Morris, Davis & Davis, 2003)	
Algılanan Fayda Değeri	Bir kişinin Çevik Metodolojiyi kullanmanın amaç odaklı, mantıklı ve pratik olduğuna inanma derecesi (Dhar & Wertenbroch, 2000)	
Akış	Bireylerin Çevik Metodolojiye tam anlamıyla dahil olduklarında sahip olacakları bütünsel deneyim. (Csikszentmihalyi & Csikszentmihalyi, 1988)	

APPENDIX B

APPROVAL FROM METU HUMAN SUBJECTS ETHICS COMMITTEE

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Konu: Değerlendirme Sonucu

05 TEMMUZ 2024

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgi: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof. Dr. Sevgi Özkan Yıldırım

Danışmanlığını yürüttüğünüz Tuğçe Vural'ın ***"Uygulayıcıların Çevik Metodoloji Kullanımını Sürdürme Niyetinin Araştırılması: Ampirik bir İnceleme"*** başlıklı araştırmanız İnsan Araştırmaları Etik Kurulu tarafından uygun görülerek **0417-ODTÜİAEK-2024** protokol numarası ile onaylanmıştır

Bilgilerinize saygılarımla sunarım

APPENDIX C

QUESTIONNAIRE - IN TURKISH

ARAŞTIRMAYA GÖNÜLLÜ KATILIM FORMU

Bu araştırma ODTÜ Enformatik Enstitüsü Bilişim Sistemleri Bölümü öğretim elemanlarından Prof. Dr. Sevgi Özkan Yıldırım ve yüksek lisans öğrencisi Tuğçe Vural tarafından yürütülmektedir. Bu form sizi araştırma koşulları hakkında bilgilendirmek için hazırlanmıştır.

Çalışmanın Amacı Nedir?
Bu çalışma, uygulayıcıların çevik metodoloji kullanımını sürdürme niyetinin incelenmesini hedeflemektedir.
Mevcut çalışmanın amacı, çevik metodoloji uygulayıcılarının bu metodolojiyi kullanmaya devam etme niyetlerini etkileyen faktörleri belirlemektir. Ayrıca belirlenen faktörlerin çevik metodoloji kullanımını sürdürme niyeti üzerindeki etkisini incelemeyi ve çevik metodoloji bağlamında genişletilmiş bir model önermeyi hedeflemektedir. Araştırmaya katılmayı kabul ederseniz, çevrimiçi olarak yöneltilecek anket sorularını yanıtlamanız beklenmektedir.

Bize Nasıl Yardımcı Olmanızı İsteyeceğiz?
Araştırmaya katılmayı kabul ederseniz sizden çevrimiçi olarak sunulan, 2 bölümden oluşan ve tamamlanması yaklaşık **10 dakika** süren soruları cevaplamanızı bekleyeceğiz. İlk bölüm, katılımcılar hakkında kişisel olmayan verilerin toplandığı bölümdür. İkinci bölümde, katılımcılardan çeşitli ifadeler hakkındaki görüşlerini Likert ölçeğini temel alarak (ifadelere katılma derecelerini 1'den 5'e kadar seçerek) belirtmelerini bekleyeceğiz.

Sizden Topladığımız Bilgileri Nasıl Kullanacağız?
Araştırmaya katılımınız tamamen gönüllülük temelinde olmalıdır. Çalışmada sizden kimlik veya çalıştığınız kurum/bölüm/birim ile ilgili belirleyici hiçbir bilgi istenmemektedir. Cevaplarınız tamamıyla gizli tutulacak, sadece araştırmacılar tarafından değerlendirilecektir. Katılımcılardan elde edilecek bilgiler toplu halde değerlendirilecek ve bilimsel amaçlı kullanılacaktır.

Katılımınız ile İlgili Bilmeniz Gerekenler:
Çalışma, genel olarak kişisel rahatsızlık verecek sorular içermemektedir. Ancak, katılım sırasında sorulardan ya da herhangi başka bir sebepten ötürü kendinizi rahatsız hissederseniz, cevaplama işini yarıda bırakıp çıkmakta serbestsiniz.

Araştırma ile İlgili Daha Fazla Bilgi Almak İsterseniz:
Bu çalışmaya katıldığınız için şimdiden teşekkür ederiz. Çalışma hakkında daha fazla bilgi almak için ODTÜ öğretim üyelerinden Prof. Dr. Sevgi Özkan Yıldırım veya yüksek lisans öğrencisi Tuğçe Vural ile iletişim kurabilirsiniz.

Bu çalışmaya tamamen gönüllü olarak katılıyorum ve istediğim zaman yarıda kesip çıkabileceğimi biliyorum. Verdiğim bilgilerin bilimsel amaçlı kullanılmasını kabul ediyorum.

Kabul Ediyorum ☐

1.BÖLÜM

Yönerge: Lütfen aşağıda yer alan seçenek içeren sorularda sizin için en uygun olan seçeneği işaretleyiniz. Diğer soruların cevaplarını ise yanlarında bulunan boşluklara yazınız.

Lütfen tüm ifadeler hakkında görüşlerinizi hiçbir satır boş kalmayacak şekilde belirtiniz.
Yaşınız: _____

Cinsiyetiniz:
☐ Kadın
☐ Erkek
☐ Cevap vermek istemiyorum

Eğitim Durumunuz:
☐ Lise
☐ Üniversite
☐ Yüksek Lisans
☐ Doktora

Çevik Metodoloji kullandığınız iş deneyim süreniz ne kadar?
☐ Hiç kullanmadım
☐ 1 yıldan az
☐ 1- 3 yıl
☐ 4- 6 yıl
☐ 7 yıl ve üzeri

Çalıştığınız şirketteki göreviniz nedir?
☐ Yazılım Mühendisi
☐ Sistem Mühendisi
☐ Test Mühendisi
☐ DevOps Mühendisi
☐ Takım Lideri
☐ Veri Bilimcisi
☐ Proje Yöneticisi
☐ İş Analisti
☐ Diğer: _____

Çevik Metodoloji kullanımı ile ilgili daha önce herhangi bir eğitim aldınız mı?
☐ Evet
☐ Hayır

Takımınızda kaç kişiden oluşmaktadır?
☐ 5'ten az
☐ 5-10 kişi
☐ 11 ve üzeri

2. BÖLÜM:

Yönerge: Aşağıda verilen ifadelere katılma derecenizi 1 ile 5 arasında bir değer seçerek belirtiniz.

	İfade	**5. Kesinlikle Katılıyorum**	**4. Katılıyorum**	**3. Kararsızım**	**2. Katılmıyorum**	**1. Hiç Katılmıyorum**
1	Çevik metodoloji kullanımı benim için otomatik / doğal hale gelmiştir. *(Using Agile Methodology has become automatic /natural to me.)*					
2	Belirli bir iş ile karşılaştığımda, Çevik Metodoloji kullanmak benim için bariz bir tercihtir. *(When faced with a particular task, using the Agile Methodology is an obvious choice for me.)*					
3	Çevik Metodoloji kullanmak benim için bir alışkanlıktır. *(I have a habit of using the Agile Methodology.)*					
4	Çevik Metodoloji kullanmak iyi bir fikirdir. *(Using Agile Methodology is a good idea.)*					
5	Çevik Metodoloji ile çalışmak işi daha ilginç hale getiriyor. *(Working with Agile Methodology makes work more interesting.)*					
6	Çevik Metodoloji ile çalışmayı seviyorum. *(I like working with Agile Methodology.)*					
7	Çevik Metodoloji kullanmak için gerekli kaynaklara sahibim. *(I have the resources necessary to use Agile Methodology.)*					
8	Çevik Metodoloji kullanmak için gerekli bilgiye sahibim. *(I have knowledge necessary to use Agile Methodology.)*					
9	Çevik Metodoloji kullanırken yaşadığım zorluklarda yardım almak için belirli bir kişi veya grup mevcuttur. *A specific person or group is available to assist with difficulties experienced in using Agile Methodology.*					
10	Çevik Metodoloji ile etkileşimim net ve anlaşılırdır. *My interaction with Agile Methodology is clear and understandable.*					
11	Çevik Metodolojiyi kullanma konusunda becerikli olmak benim için kolaydır. *To become skillful at using Agile Methodology is easy for me.*					
12	Çevik Metodoloji kullanmayı kolay buluyorum. *I find Agile Methodology easy to use.*					
13	Çevik Metodolojiyi kullanmayı bırakmak yerine kullanmaya devam etmeyi düşünüyorum. *I intend to continue using Agile Methodology rather than discontinue it.*					

14	Diğer alternatif metodolojileri kullanmak yerine Çevik Metodolojiyi kullanmaya devam etme niyetindeyim. *I intend to continue using Agile Methodology rather than using other alternatives.*					
15	Çevik Metodolojiyi kullanmaya devam etmek istiyorum. *I would like to continue my use of Agile Methodology*.					
16	Çevik Metodoloji ile genel deneyimim çok tatmin edici. *My overall experience of Agile Methodology is very satisfied*.					
17	Çevik Metodoloji ile genel deneyimim çok hoş. *My overall experience of Agile Methodology is very pleased.*					
18	Çevik Metodoloji ile genel deneyimim kesinlikle memnuniyet verici. *My overall experience of Agile Methodology is absolutely delighted*.					
19	Çevik Metodolojiyi kullanmak, iş performansımı/ verimliliğimi başlangıçta beklediğimden daha iyi bir şekilde geliştirdi. *Using Agile Methodology improved my job performance/effectiveness better than I initially expected.*					
20	Çevik Metodolojiyi kullanmak, işimde kişisel üretkenliğimi başlangıçta beklediğimden daha iyi bir şekilde artırdı. *Using Agile Methodology increased my personal productivity in my job better than I initially expected.*					
21	Çevik Metodoloji kullanmak, işim için başlangıçta beklediğimden daha faydalı oldu. *Using Agile Methodology was more helpful for my job than I initially expected.*					
22	Çevik Metodoloji kullanmak işimdeki performansımı ve verimliliğimi artırır. *Using Agile Methodology enhances my performance/ effectiveness on my job*.					
23	Çevik Metodoloji kullanmak işimdeki üretkenliğimi artırır. *Using Agile Methodology increases my productivity on my job.*					
24	Çevik Metodoloji kullanmak işimi yapmayı kolaylaştırır. *Using Agile Methodology ease to do my job.*					

APPENDIX D

QUESTIONNAIRE - IN ENGLISH

VOLUNTARY PARTICIPATION IN THE RESEARCH FORM

This research is being conducted by Prof. Dr. Sevgi Özkan Yıldırım and Tuğçe Vural, a graduate student at the Department of Information Systems at the METU Informatics Institute. This form has been prepared to inform you about the research conditions.

What is the Purpose of the Study?

This study aims to examine the intention of practitioners to continue using the Agile methodology.

The aim of the current study is to determine the factors that affect the intention of Agile methodology practitioners to continue using this methodology. It also aims to examine the effect of the determined factors on the intention to continue using the Agile methodology and to propose an expanded model in the context of Agile methodology. If you agree to participate in the research, you are expected to answer the survey questions.

How Will We Ask You to Help Us?

If you agree to participate in the research, we will expect you to answer the questions that are presented online, consist of 2 parts and take approximately 10 minutes to complete. The first part is the part where non-personal data about the participants is collected. In the second part, we will expect participants to express their opinions about various statements based on a Likert scale (choosing the degree of agreement with the statements from 1 to 5).

How Will We Use the Information We Collect from You?

Your participation in the study must be completely voluntary. No identifying information about your identity or the institution/department/unit you work for will be requested in the study. Your answers will be kept completely confidential and will only be evaluated by the researchers. The information obtained from the participants will be evaluated collectively and will be used for scientific purposes.

What You Need to Know About Your Participation:

The study generally does not include questions that will cause personal discomfort. However, if you feel uncomfortable during your participation due to the questions or any other reason, you are free to leave the task halfway through.

If You Want to Learn More About the Research:

Thank you in advance for participating in this study. For more information about the study, you can contact METU faculty member Prof. Dr. Sevgi Özkan Yıldırım or graduate student Tuğçe Vural.

I am participating in this study completely voluntarily and I know that I can stop at any time. I accept that the information I provide will be used for scientific purposes.

Accept ☐

PART 1:

Instructions: Please mark the most appropriate option for you in the item that include options below. Write the answers to the other questions in the spaces next to them.

Please state your opinions about all statements so that no line is left blank.

Your Age: _____

Your Gender:

☐ Female

☐ Male

☐ I do not want to answer

Your Education Level:

☐ High School

☐ University

☐ Master's Degree

☐ PhD

How long is your work experience using Agile Methodology?

☐ Never used

☐ Less than 1 year

☐ 1- 3 years

☐ 4- 6 years

☐ 7 years and above

What is your position in the company you work for?

☐ Software Engineer

☐ Systems Engineer

☐ Test Engineer

☐ DevOps Engineer

☐ Team Lead

☐ Data Scientist

☐ Project Manager

☐ Business Analyst

☐ Other: _____

Have you received any training on using Agile Methodology before?

☐ Yes

☐ No

How many people are there on your team?

☐ Less than 5

☐ 5-10 people

☐ 11 and above

PART 2:

Instructions: Please indicate your level of agreement with the statements below by assigning a score between 1 and 5.

	Statement	5. Strongly Agree	4. Agree	3. Neutral /Uncertain	2. Disagree	1. Strongly Disagree
1	Using Agile Methodology has become automatic /natural to me.					
2	When faced with a particular task, using the Agile Methodology is an obvious choice for me.					
3	I have a habit of using the Agile Methodology.					
4	Using Agile Methodology is a good idea.					
5	Working with Agile Methodology makes work more interesting.					
6	I like working with Agile Methodology.					
7	I have the resources necessary to use Agile Methodology.					
8	I have knowledge necessary to use Agile Methodology.					
9	A specific person or group is available to assist with difficulties experienced in using Agile Methodology.					
10	My interaction with Agile Methodology is clear and understandable.					
11	To become skillful at using Agile Methodology is easy for me.					
12	I find Agile Methodology easy to use.					
13	I intend to continue using Agile Methodology rather than discontinue it.					
14	I intend to continue using Agile Methodology rather than using other alternatives.					
15	I would like to continue my use of Agile Methodology.					
16	My overall experience of Agile Methodology is very satisfied.					
17	My overall experience of Agile Methodology is very pleased.					

18	My overall experience of Agile Methodology is absolutely delighted.					
19	Using Agile Methodology improved my job performance/effectiveness better than I initially expected.					
20	Using Agile Methodology increased my personal productivity in my job better than I initially expected.					
21	Using Agile Methodology was more helpful for my job than I initially expected.					
22	Using Agile Methodology enhances my performance/ effectiveness on my job.					
23	Using Agile Methodology increases my productivity on my job.					
24	Using Agile Methodology ease to do my job.					