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A Model for the Acceptance and Use of Online Meeting Tools

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Abstract: This study explores the utilization of online meeting tools in remote or hybrid work environments. The main research question is: "How do Turkish employees' expectations and concerns regarding the use of online meeting tools influence their intention to use these tools". To achieve the study's objectives, it is essential to ascertain the expectations and concerns of employees in Turkey regarding the use of online meeting tools. Subsequently, it is crucial to determine the extent to which these factors influence the intention to use them. Accordingly, a mixed methods research approach was deemed appropriate for this study. To validate the extended technology acceptance model (TAM) proposed as a result of the qualitative phase, the relationships in the model will be tested and interpreted with structural equation modeling (SEM) through the data set to be obtained quantitatively. Expectations (employee–employee interaction, technological contribution, and adaptation to social and organizational changes) regarding the use of online meeting tools have a considerable and statistically significant influence on employees' intention to use them through perceived usefulness and perceived ease of use. This research is expected to advance the theory, methodology, and practice of online meeting tools' acceptance, which are widely used in business.

Keywords: remote work; online meeting tools; intention to use; technology acceptance model; structural equation modeling; text mining

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1. Introduction

Prior to 2020, there was a shift in the way knowledge-based organizations worked [1]. Personal technologies and digital connectivity had evolved so rapidly [2] that people were asking, "Do we really need to come into the office to do our jobs?" We got our answer during the pandemic-era lockdowns [3]. In fact, we learned that most of us do not need to be in a physical workplace with our colleagues to get work done [4].

The remote work model offers significant benefits to companies and employees. Companies can reduce or eliminate real estate costs, reduce immigration issues, and recruit and deploy talent globally [5,6]. Employees have geographic flexibility to live where they want, eliminate commuting, and report a better work–life balance [7,8]. However, concerns remain about how remote work influences communication, collaboration, information sharing, socializing, performance appraisal, and data security [9–11].

The widespread shift from traditional, side-by-side work to remote work can be said to have begun in the 1970s with the adoption of telecommuting policies [12]. This was prompted by the oil crisis caused by the OPEC oil embargo in 1973, when rising gas prices made commuting more expensive [13]. These policies allowed employees to work from their homes, co-working spaces, or anywhere else they chose instead of the office. They started working remotely, occasionally on a part-time or full-time basis, on certain weekdays. With the advent of personal computers, smartphones, high-speed internet, cloud computing, and video calls, remote work has become increasingly prevalent over the past two decades [14].

In recent years, many companies have allowed more employees to work from home [15–17]. By 2020, the pandemic process experienced around the world has dragged organizations that had never even considered remote work into this work model, allowing managers and

employees to experience remote work [18]. Companies like GitLab have taken this trend a step further, eliminating offices altogether and dispersing everyone from the lowest level employee to the CEO [1].

When employees opt to work remotely rather than in an office environment, they utilize online meeting tools such as Zoom, Microsoft Teams, and Google Meet to communicate with their colleagues, conduct video meetings and conference calls, and collaborate in real-time [19].

The popularity of online meeting tools, especially after the pandemic, and the high potential for their use by remote workers, as revealed in the literature, raises the question of how to integrate these tools into remote work environments [20–24]. Even before the pandemic, remote work had a host of advantages such as work autonomy, reduced interruptions, and flexible schedules [6]. Although developers are working remotely, it is worth noting that post-pandemic remote work differs from traditional forms. With an employee-centered approach, the adaptation of individuals working from home after the pandemic to these technologies becomes the primary focus [9,18,19,21,23]. Therefore, it is necessary to identify the factors that influence the acceptance of online meeting tools by employees.

Studies on the acceptance and use of new technology generally focus on the factors that motivate individuals to accept the system [4,19,22,24–26]. In this context, models of acceptance and use of information technologies will be a good guide to identify the factors that influence the acceptance of online meeting tools.

Technology acceptance models, with theoretical foundations based on social psychology and human behavior studies, have been developed to explain an individuals' acceptance and use of a particular technology [27–31]. Existing technology acceptance models assume that expectations and concerns about using a technology will influence attitudes toward that technology, and that attitudes will influence intentions, and thus, whether or not to use the technology [27]. According to the theory of reasoned action [32], its extended version, the theory of planned behavior (TPB) [33], and the expectancy-value theory that is accepted as the basis of these theories [32], the "expectancy" belief determines the attitude towards a particular behavior [34]. The unified theory of acceptance and use of technology (UTAUT/UTAUT2) [29,31] states that performance expectancy, effort expectancy, and social influence have a positive effect on the behavioral intention, which predicts the use of an information technology. Bhattacherjee [35], on the other hand, stated that the acceptance of an information system in the first step is an important dimension of the success of information systems, but the ultimate success is the continuous use of the system and based his research on expectancy confirmation theory. Oliver [36] defined expectation as the belief that a certain output or outcome will be achieved following an action and explained the process of selecting a product or service through the hierarchy of expectation-attitude-intention. The technology acceptance model (TAM) [27], which is the most widely accepted model for the acceptance of information systems, explains the causal relationships between beliefs about the usefulness and ease of use of a system and the user's attitudes, intentions and actual usage behavior.

Legris, Ingham, and Collerette [37] reviewed TAM-based research and found that although the model predicted intention to use, it did not consider significant organizational and social factors. Additionally, the review found that external variables affecting perceived usefulness and ease of use were not clearly identified, and the model primarily focused on voluntary use environments. Furthermore, studies of office automation systems were conducted mainly on student groups for cost and ease, suggesting the model would benefit from application to the market.

Extending TAM to evaluate the acceptance level of online meeting tools has become a growing trend with the pandemic. Earlier research [38–43] has explored the acceptance of online meeting platforms among educators and learners by incorporating diverse external dimensions such as perceived risk, system quality, social influence, and perceived interactivity with TAM. The results of prior studies indicate that both students and teachers

are open to accepting online meeting platforms. However, previous studies have several limitations as they mainly focus on the acceptance of video conferencing technologies by students and teachers, with little consideration for business processes and employees. Thus, further empirical studies are necessary to examine the acceptance of online meeting tools across various professional groups.

A study [19] in the literature exploring online meeting tools with technology acceptance models investigated the impact of perceived risk on the intention to use, focusing solely on the Google Meet tool and selecting students as the target group. Another study [38] examined the effects of social isolation, technostress, and personality factors on the intention to use these tools, enlisting students, instructors, and university staff as the target group. During the pandemic, a study [39] was conducted to investigate the factors influencing the adoption of online meeting tools in public higher education institutions. The target audience for this research was the staff of a university, and the UTAUT2 model variables were employed to analyze the data. When looking at online meeting tools as e-learning platforms, a study [40] was conducted with students to identify the factors that impact acceptance of such platforms. The existing TAM was used, combining systemic characteristics such as system quality and user interface. A study [41] of students' tendency to use videoconferencing software incorporated the perceived interactivity factor from other literature into the UTAUT model. This application focused on university college students. A study [42] analyzed the adoption of Google Meet among graduate students and explored the impact of self-efficacy, information quality, perceived enjoyment, perceived usefulness, and perceived ease of use as well as effectiveness. A second study [43], centered on Google Meet as an online meeting tool, directly utilized the dimensions from the TAM and targeted university students without additional variables. A study [24] aimed to identify the factors that impact the intention to organize an online event using online meeting tools. The study applied the factors within TAM and TPB to random users. In another study [44], the relationship between social influence and perceived ease of use for online meeting tools was examined.

This study focuses on the factors that influence employees' intention to use online meeting tools that are used in remote work environments and whose number continues to grow. Despite the intensity of studies on the acceptance of various tools, the novelty and inadequacy of studies on the use and acceptance of tools in remote work environments constitute an important gap in this field. This study, which examines the impacts on remote workers' adoption of online meeting platforms via TAM framework, is meaningful.

Background

When we first decided to study the use of online meeting tools in business, we needed to determine an approach to this subject. We were intrigued by the determinants that affect the tool's use and wished to assess the extent to which these factors influence the acceptance and use of these tools. When reviewing the literature in this field, we discovered that the variables list solely focused on the technical elements of these tools, while ignoring organizational and societal factors. Furthermore, studies primarily targeted the field of education and students. We also found no research on the acceptance of these tools, which play a crucial role in remote work, within businesses and their willingness to integrate them into their business processes.

Microsoft's latest report on the future of work [45] provides a thorough summary of recent research developments surrounding hybrid work and addresses the issue from the perspectives of individuals, teams, organizations, and society. We formulated our study to cover the aspects that affect online meeting tools that are at the heart of remote work. Therefore, during the qualitative interviews and the development of the survey questions for the quantitative study, we tried to address all four dimensions.

The studies employing the technology acceptance model for online meeting tools directly incorporated the antecedents of the technology acceptance model, which are commonly used in the existing literature, and provided the survey questions from the

existing scales of these dimensions. We have not found any studies that specifically examine the incorporation of online meeting tools into business processes, despite such tools being widely adopted by businesses during the pandemic. Moreover, such studies should incorporate the perspectives of key decision makers in businesses and software developers who create such tools, and should address individual, team, organizational, and societal aspects. To address this literature gap, our study concentrated on how these tools are employed in everyday work life within businesses and their impact on remote working, rather than their technical aspects or personal preferences. Decision makers hold the responsibility of selecting which tools are deployed in companies, for what objective, and how they are employed. To gain insight, we conducted interviews with the developers of Zoom and Microsoft Teams, as well as decision makers from various companies. These people were selected both as decision makers and as people who were familiar with online meeting tools and were also users of these tools. Care was taken to ensure that a diverse range of industries, businesses, and departments were represented.

After identifying the factors that influence the acceptance and use of online meeting tools in a company through expectations and concerns, we developed a theoretical model by adding the dimensions as antecedents to the TAM to determine whether these factors are also endorsed by business professionals in different sectors. To investigate the theoretical model that we contributed to the literature, we collaborated with experts in online meeting tools and drafted novel survey questions to assess the different dimensions of our proposed model. We performed reliability and validity tests on the self-developed scale, and subsequently distributed the questionnaire to employees in various sectors who use diverse online meeting tools. We analyzed the acceptance and use of these tools by companies using SEM.

We compared the influential factors that we discovered affecting the acceptance and use of online meeting tools in companies with the factors found in similar studies in the literature, and we also compared the effects of these factors on the intention to use. Lastly, we presented suggestions for developers and decision makers. The qualitative and quantitative phases of this study aim to address the gap in the use of online meeting tools in private companies and to contribute to new studies on these tools and to studies in the area of the technology acceptance model.

2. Materials and Methods

The research question addressed in this study was: "How do employees' expectations and concerns about using online meeting tools to collaborate influence their use of the software?" Within the scope of the main research question, the main purpose of this study was to develop a reliable and valid model for the acceptance of online meeting tools in remote work environments. In this context, the objectives of the study were: to identify the factors that influence the use of online meeting tools by individuals working remotely through expectations and concerns, to present a proposed model for the acceptance of the use of online meeting tools in remote work by linking the factors identified with the factors tested in existing technology acceptance models, to develop an instrument to test the proposed acceptance model, to test and interpret the suitability of the proposed acceptance model for the data set obtained through the developed instrument.

In examining the research question, it was necessary to first identify the expectations and concerns of remote workers regarding the use of online meeting tools, and then to determine the extent to which these expectations and concerns influence the intention to use these tools through numerical data. In this context, a mixed methods research approach was deemed appropriate as the method to be followed in the study.

The first stage of the study involved the development of a theoretical acceptance model using exploratory open-ended questions to determine the expectations and concerns of individuals working in organizations that have adopted remote work that influence their intention to use online meeting tools, and to develop a theoretical acceptance model based on the data obtained as a result of the evaluations. The second and quantitative stage of

the study was the process of testing the proposed model through structural analysis with structural equation modeling and interpreting the relationships between factors.

2.1. Qualitative Stage

This section presents the qualitative stage, which was the basis of the study and in which answers to the exploratory part of the research problem were sought. Expectations and concerns about online meeting tools, which were the first two sub-questions of the research, were presented and hypotheses were developed in this direction, and a model of acceptance of online meeting tools was proposed.

The qualitative stage of the study consisted of four sub-stages: qualitative data acquisition, text mining, accessing qualitative findings, and proposing a theoretical model based on the findings (Figure 1). The qualitative data collection phase included interviewing the developers of the online meeting tool, creating open-ended questions, interviewing decision makers in the companies, and recording and transcribing the interviews. Qualitative analysis of the open-ended questions was conducted using QDA Miner software. This was followed by the development of codes and categories based on concerns and expectations, and the creation of a theoretical technology acceptance model by linking it to existing technology acceptance models.

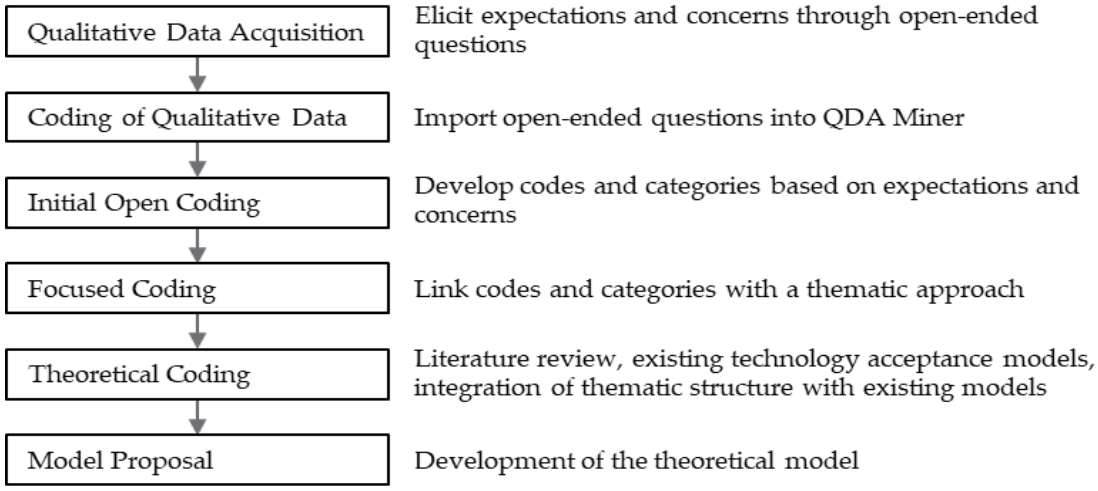

Figure 1. Steps taken in the qualitative stage.

2.1.1. Qualitative Data Acquisition

At the beginning of the qualitative data collection phase, a developer from Zoom and Microsoft in Turkey was interviewed about Zoom and Microsoft Teams software. After the interview questions were finalized, interviews about online meeting tools were conducted with volunteer decision makers from 15 different private sector companies in Turkey that have adopted remote or hybrid work.

Within the scope of the interview, decision makers were asked questions [46] such as which online meeting tool they use, what they consider in choosing this tool, who decides on the choice of the tool and whether the employees' opinions are taken into consideration, what are the expectations and concerns of the organization and employees, what purpose they use the online meeting tool in the organization, which features of the tool they are satisfied or dissatisfied with, the contribution of the online meeting tool to business processes, the future status of remote work and online meeting tools.

The data were collected over a three-month period from March to June 2021. Interviews lasted 40–70 min each. Detailed information about the respondents is provided in Table 1. As the literature suggests that six interviews are sufficient to reach meta-themes and saturation can be achieved within twelve [47], the number of participants in this study seems sufficient.

Table 1. Descriptive statistics of the qualitative study sample.

Participant	Gender	Age	Sector	Position
P1	Male	39	IT	Senior Developer
P2	Male	37	IT	Senior Developer
P3	Female	39	IT	Project Manager
P4	Male	46	Food	IT Manager
P5	Female	37	Energy	IT Manager
P6	Female	52	Clothing	HR Manager
P7	Female	43	Architecture	General Manager
P8	Male	33	IT	General Manager
P9	Male	37	Chemical	Project Manager
P10	Male	36	Petrochemicals	IT Manager
P11	Male	33	Tourism	IT Manager
P12	Male	58	Telecommunication	IT Manager
P13	Male	44	Automotive	IT Manager
P14	Female	47	Manufacturing	HR Manager
P15	Male	35	IT	General Manager
P16	Male	38	IT	IT Manager
P17	Female	41	IT	HR Manager

2.1.2. Data Coding and Analysis

The recorded interviews were transcribed using pyTranscriber and then edited manually. Responses to open-ended interview questions were copied to Microsoft Word and then transferred to QDA Miner software for analysis.

In order to code the responses using QDA Miner, the grounded theory approach [48,49] was utilized to categorize text passages containing expectations and concerns into concept categories.

In the initial open coding process, all data was reviewed, and notes were made where they were deemed important. Names were determined to represent the event or observation across sentence or text, and then events or observations that were close to each other were handled under the same name (Table 2), and those that were related to each other were handled under the same categories.

Table 2. Codes that occurred during initial open coding.

infrastructure requirement	security	problem solving
poll	fast decision making	reporting
encryption	hybrid work	reaction
livestreaming	communication	simultaneous translation
collaboration	internet speed	trending technologies
environmental pollution	job satisfaction	socialization
file transfer	convenience	teamwork
irregular working hours	cost	meeting rules
screen sharing	after sales support	remote work
ergonomics	focus	efficiency
education	private life	software constraints
scheduling	performance measurement	time
unofficial groups	mention	sharing
intranet	flexibility	dynamic teams
brainstorming	motivation	interaction
agile	job satisfaction	digital contents
planned work	corporate culture	privacy
workload	mobbing	contribution

In the focused coding process, categories were named and clarified within the scope of the events and observations that they covered, and then the codes and categories that seemed independent of each other were linked together with a thematic approach. During

the focused coding process, a continuous comparative analysis was conducted, and new codes/categories were created as needed. In this context, the codes and categories formed after the initial open coding process were modified.

As a final step of the qualitative phase, the thematic structure obtained was linked to the existing theories in the field in order to strengthen the explanatory power of the structure [49]. The expectation-attitude-intention hierarchy [36], which is also the theoretical basis of the quantitative study, is also the basis of theories of technology acceptance and use. Expectations, which are the beliefs that a certain output or outcome will result from an action, determine attitudes toward a particular behavior [32]. The factors that lead individuals to behavioral use/purchase intentions are their perceptions and attitudes toward the product or system. In this context, technology acceptance models [27–31], which are the most widely accepted model for the acceptance of information systems, were considered appropriate to associate with the categories and codes in the structure obtained as a result of the focused coding.

During the theoretical coding process, we focused on integrating expectations and attitudes into the expectation-attitude-intention hierarchy. Accordingly, semantic relationships were established between expectations and concerns about online meeting tools and the factors "Perceived Usefulness" and "Perceived Ease of Use" [27], which represent attitudes toward online meeting tools and predict behavioral intention to use in the technology acceptance model (Figure 2).

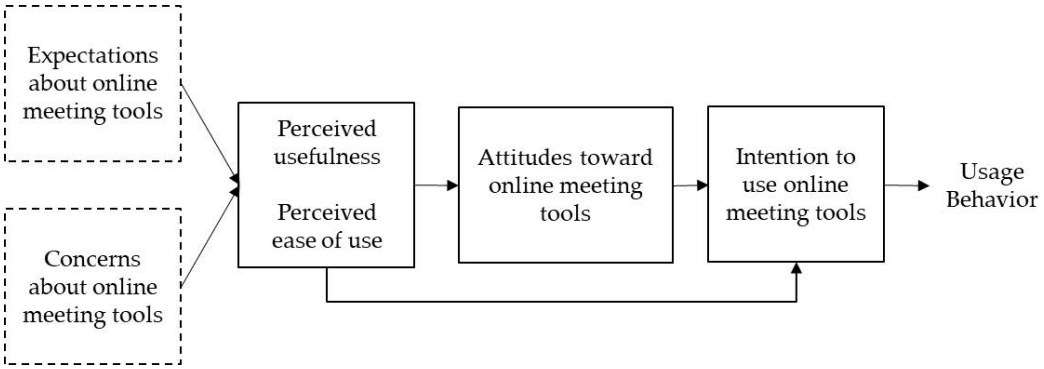

Figure 2. Theoretical integration and the expectancy–attitude–intention hierarchy.

After the coding and data categorization steps, the final situation obtained as a result of integrating the qualitative findings with the technology acceptance model is presented in Table 3. Expectations that influence the intention to use online meeting tools in organizations are grouped under the dimensions of employee–employee interaction, technological contribution, adaptation to social and organizational changes; concerns are grouped under the dimensions of perceived employee barrier, intense technology barrier, working life, and work–life balance. The definitions and examples of statements for these dimensions are presented in Table 3.

Table 3. Codes and categories associated with the technology acceptance model.

Dimension	Definition
Employee–Employee Interaction	A measure of employees' expectation of increased opportunities to collaborate with colleagues and exchange information or documents. e.g., It facilitates creating flexible and dynamic competency groups outside of the organizational structure.

Table 3. *Cont.*

Dimension	Definition
Technological Contribution	The extent to which employees expect online meeting tools to enrich the work environment and improve work processes and business results. e.g., It is beneficial to document the meetings and create digital content.
Adaptation to Social and Organizational Changes	A measure of the expectation that online meeting tools will help employees adapt to social and organizational change. e.g., It contributes achieving the quality of face-to-face work while working remotely.
Perceived Employee Barrier	The extent to which employees are concerned that interacting with colleagues through the use of online meeting tools will delay/interfere with their current work. e.g., I am concerned that the information I share may fall into the wrong hands.
Intense Technology Barrier	The extent to which employees are concerned that the use of online meeting tools will result in a technology-intensive environment and that the quality of work will suffer. e.g., I am uncomfortable in environments where technology is heavily utilized.
Working Life and Work–Life Balance	The extent to which employees are concerned that the use of online meeting tools will interfere with their work and negatively impact their work–life balance. e.g., Using the online meeting tool increases workload and performance expectations.
Perceived Usefulness	The degree to which a person believes that using a particular system will improve job performance. e.g., Using the online meeting tool enhances my work and increases my productivity and efficiency.
Perceived Ease of Use	The degree to which a person believes they can use a system without physical or mental effort. e.g., It's simple for me to learn how to utilize the online meeting tool.
Intention to Use	A measure of the likelihood that a person will perform a behavior. e.g., If I have access to online meeting tools, I intend to use them.

2.1.3. Theoretical Model for the Acceptance of Online Meeting Tools

In the light of the results of the qualitative phase, a theoretical acceptance model was proposed and research hypotheses belonging to the model were developed. Glaser and Strauss [50] stated that the aim of grounded theory studies is to obtain a comprehensive grounded theory that explains a scheme or process related to the focused phenomenon and whose explanatory power is strengthened by integrating it with the relevant field. The theoretical acceptance model, derived using grounded theory in the qualitative phase, is depicted in Figure 3.

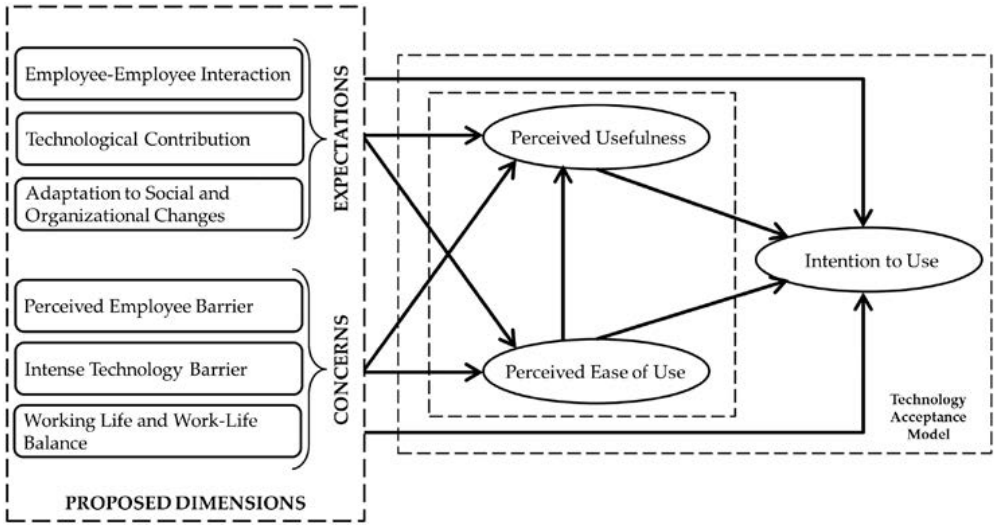

Figure 3. Proposed model for the acceptance of online meeting tools.

Considering the dimensions and definitions of the proposed theoretical acceptance model, it is claimed that the positive (employee–employee interaction) and negative (perceived employee barrier) reflections of employees' interactions with their colleagues, the positive (technological contribution) and negative (intense technology barrier) reflections of today's technologies on employees' business processes and business success, and the positive (adaptation to social and organizational changes) and negative (working life and work–life balance) reflections of post-pandemic remote/hybrid work models on employees and organizations have an impact on the perceived usefulness and perceived ease of use dimensions that predict employees' intention to use online meeting tools.

2.1.4. Developing the Research Hypotheses

Employee–employee interaction is a measure of employees' expectation of increased opportunities to collaborate with colleagues (internal/external) and exchange information or documents. Based on the qualitative analysis results of this study, employees in companies expect online meeting tools to increase interaction with colleagues. Online video meetings have become one of the most widely used communication methods in the workplace [51]. Collaboration was also identified as the key feature for students in education studies, with a suggestion to prioritize it in future distance classroom design [52]. A study on students' perceptions and preferences for online education revealed that interactivity is crucial for the success of online courses [53]. A study found that using the Microsoft Teams platform facilitated communication between students, classmates, and lecturers, making it an effective platform for collaboration [54]. Online meeting tools provide qualitative researchers with a distinctive chance to gather data and a practical and budget-friendly substitute to face-to-face interviews [55]. In the same study, participants reported feeling more at ease addressing a personal subject such as parenting from a chosen location. Furthermore, if both parents are involved in the interview, they have the option to join from separate locations, minimizing any interference with their regular work and home routines. Brown has theorized that collaborative technologies lead to increased perceived usefulness and perceived ease of use when there are higher levels of social presence, improved immediacy, and greater concurrency [56].

Technological contribution is a measure of the extent to which employees expect online meeting tools to enrich the work environment, improve work processes and business results. Digital collaboration tools are an efficient solution for businesses with diverse work styles to assist their staff, and for employees located in various places to sustain their work procedures smoothly [57]. Online meeting tools' different features like breakout rooms, polls, screen sharing, chats, recording, mute button, and camera were all found to impact

the students' communication quality, learning, and consequently their perceptions [58]. A study [22] reported that factors such as providing various multimedia types, enabling access to services anytime and anywhere, and facilitating interactive communication had a significant positive impact on the continuous intention to utilize virtual meeting platforms. A study on students' perceptions of online learning revealed that the most significant benefits to students were flexible schedules and convenience [53]. They also indicated that online education offered them the opportunity to learn at their own pace and at their own convenience.

Based on the results of the qualitative analysis, employees expect online meeting tools to enable them to adjust to social and organizational changes. As witnessed during the pandemic, online meeting tools have addressed the limitations of inconvenient communication and inadequate educational resources through an instrumental role in fostering learning [52] and collaboration [51]. During the pandemic's lockdown or partial lockdown, and even as preventative measures were relaxed, countless students continued to utilize virtual meeting platforms in order to access online educational resources [41]. Moving community engagement processes from in-person to online revealed several benefits of virtual participation, according to stakeholder feedback [59]. These benefits include increased flexibility, a reduction in travel expenses, overcoming geographical limitations, a decreased burden for those with physical disabilities, and the option to record meetings for those unable to attend simultaneously.

Except for the implicit hypotheses in the expectancy–attitude–intention relationship, which is also the theoretical basis of the study, the hypotheses for this study were developed within the proposed model developed as a result of the qualitative phase, since this is an exploratory study for instrument development. In the process of hypothesis development, the expectancy–attitude–intention relationship [36] was used. Accordingly, among the three dimensions representing the technology acceptance model [27], perceived usefulness and perceived ease of use represent the attitude towards online meeting tools, and intention to use represents the behavioral intention formed as a result of the attitude [40,41]. The external variables of the model are represented by the category of expectations.

Expectations represent the sub-expectations that employees believe they will achieve by using online meeting tools. Expectancy beliefs determine attitudes toward a behavior [34]. According to the proposed model, expectations (employee–employee interaction, technological contribution, adaptation to social and organizational changes) have a positive effect on perceived usefulness, perceived ease of use, and intention to use online meeting tools.

H1. *Expectations have a positive impact on the perceived usefulness.*

H2. *Expectations have a positive impact on the perceived ease of use.*

H3. *Expectations have a direct positive impact on the intention to use.*

Venkatesh and Davis [28] concluded that perceived usefulness and perceived ease of use have a direct effect on behavioral intention, while attitude has limited ability to explain behavioral intention or actual system use, and thus excluded the attitude variable from the model. In this study, perceived usefulness and perceived ease of use were included in the model instead of the attitude factor.

Previous studies [27–31] have indicated that the perceived ease of use has a direct impact on the intention to use, as well as an impact on the intention to use via perceived usefulness [38,40,43]. It can be argued that perceived usefulness and perceived ease of use are correlated, and the easier the technology is to use, the more useful it will be [41]. Previous research on online meeting tools has established the connections of the TAM's central construct in various settings [19]. When users find technology easy-to-use, they are likely to perceive it as a useful tool [38]. Ease of use was identified as a top evaluation criterion with maximum weight priority in a study that assessed remote working online

meeting tools [20]. The desire of students to use web-based video conferencing for learning is influenced by factors such as ease of use, usefulness, and complexity [60]. Individuals who perceive online meeting tools as advantageous and straightforward may possess a favorable attitude towards this technology and, consequently, are inclined to use it even after the pandemic ends [38–40]. As users master online meeting platforms and recognize their utility, they develop favorable attitudes towards these platforms and intend to use them extensively.

H4. *Perceived ease of use has a positive impact on perceived usefulness.*

H5. *Perceived ease of use has a positive impact on intention to use.*

TAM postulates that an individual's perceived usefulness precedes their attitude toward it [28,30]. Studies on online meeting tools have demonstrated a significant correlation between these two constructs [39–43]. In a study regarding the approval of e-learning among students, a crucial factor impacting the use of online meeting tools by the instructor was the perceived usefulness [61]. The perceived usefulness of online meeting tools is linked to expectations of productivity and efficiency, according to Spanish workers [62]. It is worth noting, however, that although individuals may believe that adopting such technologies will lead to improved performance, they may not necessarily hold entirely positive attitudes towards them due to the expectation that they are used as a job requirement, regardless of personal preference [38].

H6. *Perceived usefulness has a positive impact on intention to use.*

2.2. Quantitative Stage

This section, which deals with the quantitative phase of the study, consists of two sub-stages. The first stage was aimed at developing the quantitative instrument needed to test the model proposed in the qualitative stage. The second stage covers the evaluation processes of the proposed structural model through the quantitative instrument developed on the basis of the qualitative findings.

2.2.1. Quantitative Instrument Development and Quantitative Data Acquisition

The process of quantitative instrument development follows Moore and Benbasat's [63] approach, consisting of item creation, scale development, and instrument testing. This process is elaborated further using the approach of Wilkinson, Roberts, and While [64]. The final process is depicted in Figure 4.

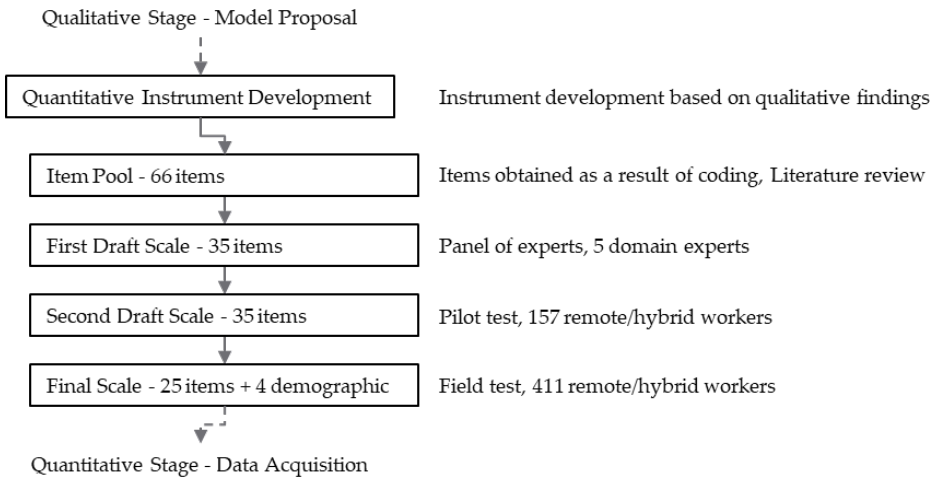

Figure 4. Quantitative instrument development process.

The first step in the quantitative instrument development process was the generation of an item pool. In order to select the best possible items, the items obtained as a result of the coding performed in the qualitative research and the item styles of the technology acceptance models in the literature were used [65–76]. At the end of this step, a pool of 66 items was generated.

In the second step, the purpose and scope of the study as well as the results of the qualitative phase were presented to a panel of 5 experts in the field and the experts were asked to evaluate the items generated in the first step in terms of content and face validity. Based on expert feedback, similar statements, those lacking discriminatory features, and those not aligned with the theoretical foundation were excluded. Additionally, a number of improvements were made to ensure clear understanding and fluency.

In the third step, a pilot study was conducted to test the validity and reliability of the scale. In this context, an online survey consisting of 35 items (Table 4) was distributed to companies in Turkey that implemented the remote/hybrid work model, and a sample of 157 participants was obtained. The item–total correlation values were calculated and 10 items with correlation value less than 0.30 [77] were eliminated from the scale. Accordingly, the dimensions of "perceived employee barrier", "intense technology barrier", and "working life and work–life balance", which comprise these ten items, were also excluded from the proposed model.

Table 4. Survey statements after the panel of experts.

Dimension	Survey Statement	Item No
Employee–Employee Interaction (Source: Authors)	It facilitates creating flexible and dynamic competency groups outside of the organizational structure.	14
	It provides the chance to work without personal obstacles and concerns that could arise during in-person communication.	15
	It enables me to communicate with my supervisor and colleagues more efficiently.	18
	It contributes to gathering input from experts, both internal and external, to generate ideas and advance projects.	21
	I am delighted to remotely meet and cooperate with my colleagues.	24
	It provides the chance to conveniently connect and conduct business with suppliers and customers.	25
Technological Contribution (Source: Authors)	It contributes to my personal growth by providing me with current information beyond work-related content.	20
	It facilitates and accelerates the tracking of job requests, contributions and changes.	22
	It is beneficial to document the meetings and create digital content.	23
	It facilitates the organization of large-scale events to which internal and external participants are invited.	28
Adaptation to Social and Organizational Changes (Source: Authors)	It contributes to achieving the quality of face-to-face work while working remotely.	19
	It supports reducing environmental pollution and protecting nature.	26
	It facilitates the adaptation of individuals with disabilities in the workplace.	27
	The use of cutting-edge technology in my job brings me joy.	29

Table 4. *Cont.*

Dimension	Survey Statement	Item No
Perceived Employee Barriers (Source: Authors)	I am concerned that the information I share may fall into the wrong hands.	1
	I am concerned about harassment and violation of my privacy by others who participate in the system.	2
	The use of the online meeting tool creates a sense of constant monitoring in my work which makes me feel uncomfortable.	3
	When I turn on the camera, I feel insecure, nervous, and restless.	8
Intense Technology Barriers (Source: Authors)	I am uncomfortable with spontaneous and unplanned meetings.	6
	I am uncomfortable in environments where technology is heavily utilized.	7
	Using the online meeting tool disrupts my current work.	9
Working Life and Work–Life Balance (Source: Authors)	Using the online meeting tool increases my work hours.	4
	Using the online meeting tool increases workload and performance expectations.	5
	It complicates the process of measuring and evaluating employee performance.	10
Perceived Usefulness (Source: Authors, [27])	Using the online meeting tool enhances my work and increases my productivity and efficiency.	13
	It enhances the visibility and appreciation of my personal contributions.	16
	It allows for quicker action and faster solutions.	17
	The use of online meeting tools in businesses provides numerous benefits.	35
Perceived Ease of Use (Source: Authors, [27])	It's simple for me to learn how to utilize the online meeting tool.	11
	It doesn't require additional resources or costs for me to begin using the online meeting tool.	12
	The online meeting tools are clear and easy to understand.	33
	I find the online meeting tool simple to use.	34
Intention to Use (Source: Authors, [27])	I would like to continue using it even if it's not mandatory.	30
	If I have access to online meeting tools, I intend to use them.	31
	I believe that online meeting tools will continue to be a fixture in our professional lives.	32

In the last step, in accordance with the pilot study's results, an online survey comprising 25 items (items 11–35 in Table 4) and four demographic questions was distributed to companies in Turkey that implemented the remote/hybrid work model and a field study was conducted in October 2022 in which 411 employees participated.

2.2.2. Quantitative Analysis Methods

LISREL and SPSS software was utilized to conduct quantitative data analysis. The significance level was established at $p = 0.05$ and $p = 0.01$. Prior to analysis, the scales' reliability and validity were evaluated.

The internal consistency method was utilized to calculate the scale's reliability levels in the research. The Cronbach alpha reliability measure was then used, and the item–total correlation was found. The deletion of any scale item was examined to determine changes in Cronbach alpha values. The validity of the scale was tested through exploratory and confirmatory factor analyses. There are several fit indices utilized in determining the model's suitability in confirmatory factor analysis. This study considered fit criteria including RMSEA, SRMR, NFI, CFI, and GFI in addition to the Chi-squared goodness-of-fit index (Table 5) [78]. The research hypotheses' outcomes were investigated using structural equation modeling. Since the sample size was adequate for the distribution of the data gathered during the quantitative phase, parametric methods were utilized, which provide greater statistical power, relying on the central limit theorem [79].

Table 5. Ranges of compliance criteria used in the study.

Fit Measure	Good Fit	Acceptable Fit
x^2/df	≤ 3	≤ 5
RMSEA	$0 < \text{RMSEA} < 0.05$	$0.05 \leq \text{RMSEA} \leq 0.10$
SRMR	$0 \leq \text{SRMR} \leq 0.05$	$0.05 < \text{SRMR} \leq 0.10$
NFI	$0.95 \leq \text{NFI} \leq 1.00$	$0.90 \leq \text{NFI} < 0.95$
NNFI	$0.97 \leq \text{NNFI} \leq 1.00$	$0.90 \leq \text{NNFI} < 0.97$
CFI	$0.97 \leq \text{CFI} \leq 1.00$	$0.90 \leq \text{CFI} < 0.97$
GFI	$0.95 \leq \text{GFI} \leq 1.00$	$0.90 \leq \text{GFI} < 0.95$
AGFI	$0.90 \leq \text{AGFI} \leq 1.00$	$0.85 \leq \text{AGFI} < 0.90$

In addition to analyzing the participants' demographic characteristics using frequency and percentage analysis, the independent samples *t*-test and one-way ANOVA analysis were utilized to compare these characteristics to the measurement tools.

3. Results

In the pilot test part of the quantitative phase, we sampled 157 participants to evaluate the validity and reliability of our scale. Table 6 presents our item analysis results, reliability levels, and exploratory factor analysis results with respect to the validity and reliability of the scale. We anticipate the items in the scale to have a correlation value of no less than 0.30 [77].

Table 6. Reliability, exploratory factor analysis, and item analysis results.

Item No	Factors						Item–Total Correlation
	1	2	3	4	5	6	
Item 21	0.640						0.720
Item 24	0.689						0.754
Item 14	0.714						0.779
Item 18	0.716						0.711
Item 15	0.720						0.665
Item 25	0.743						0.752
Item 33		0.809					0.730
Item 34		0.834					0.651
Item 12		0.890					0.550
Item 11		0.904					0.619
Item 22			0.832				0.606
Item 20			0.833				0.645

Table 6. *Cont.*

Item No	Factors						Item–Total Correlation
	1	2	3	4	5	6	
Item 28			0.846				0.638
Item 23			0.864				0.577
Item 29				0.733			0.695
Item 26				0.819			0.668
Item 19				0.827			0.663
Item 27				0.832			0.672
Item 35					0.611		0.758
Item 17					0.787		0.640
Item 13					0.789		0.708
Item 16					0.850		0.508
Item 31						0.734	0.774
Item 30						0.739	0.760
Item 32						0.769	0.684
Reliability	0.925	0.957	0.928	0.925	0.903	0.93	0.957
Eigenvalue	4.032	3.873	3.656	3.47	3.058	2.54	
Explained Variance (%)	16.13	15.49	14.63	13.88	12.23	10.16	82.516
KMO: 0.912; Bartlett's Test of Sphericity = $X^2(300) = 3953.593$; $p = 0.000$							

Note. 1: Employee–employee interaction, 2: perceived ease of use, 3: technological contribution, 4: adaptation to social and organizational changes, 5: perceived usefulness, 6: intention to use.

Cronbach's alpha analysis was conducted to ascertain the scale's reliability, which was found to be high (0.957). The item–total correlation values were calculated and 10 items with correlation value less than 0.30 were eliminated from the scale. Accordingly, the dimensions of the "perceived employee barrier", "intense technology barrier", and "working life and work–life balance", which comprise these ten items, were also excluded from the proposed model.

KMO (Kaiser–Meyer–Olkin) and Bartlett's sphericity tests were used to determine the adequacy of data for factor analysis and to ascertain the existence of a relationship between variables [77]. The KMO value was greater than 0.60 and Bartlett's test was significant ($p < 0.01$). It can be concluded that the sample data is appropriate for factor analysis, and the data obtained follows a multivariate normal distribution.

In order to determine the inclusion of an item in the scale, its factor loading value must exceed 0.45 [77]. The factor analysis revealed a 6-factor structure for the scale with a total variance explained of 82.516%. As the scale consisted of multiple factors, a "varimax" vertical rotation was conducted.

To enhance the precision of the factor structure determination, it is recommended to evaluate the scree plot featuring observation values. Figure 5 displays the scree plot for the given scale.

When analyzing the scree plot of the scale, it is evident that the break occurs after the sixth factor, when the observation value of the scale drops below 1. The sixth factor represents the point at which the dimensions become stationary, indicating that a six-factor structure of the scale is optimal.

When examining the reliability levels of the factors, it was found that the employee–employee interaction dimension has a high reliability coefficient ($\alpha = 0.925$). This factor alone explains 16.13% of the scale. The perceived ease of use dimension has a high reliability coefficient ($\alpha = 0.957$) for its items and alone explains 15.49% of the scale. The technological contribution dimension reliability analysis ($\alpha = 0.928$) achieved a very high level, accounting for 14.63% of the scale. Meanwhile, the adaptation to social and organizational changes dimension obtained a high level ($\alpha = 0.925$), accounting for 13.88% of the scale. The perceived usefulness dimension yielded a reliability analysis result of $\alpha = 0.903$, indicating a high

level of reliability. This factor alone accounts for 12.23% of the scale. Upon examining the items in the intention to use dimension, a reliability analysis result of $\alpha = 0.930$ was also found to be at a high level. This factor alone accounts for 10.16% of the scale.

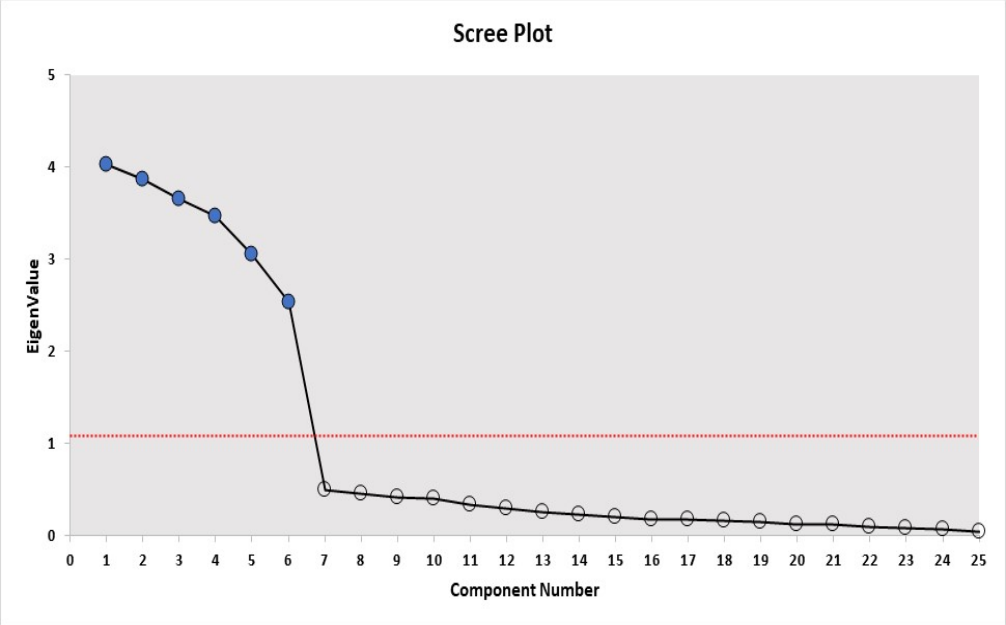

Figure 5. Scree plot of the scale.

Harman's one-factor test is the leading method to control common method bias (CMB) [80]. This test concludes that there is a critical level of CMB if a single factor emerges from an exploratory factor analysis including all items belonging to the constructs (eigenvalue greater than 1) or if a dominant factor structure explaining over 50% of the variance is detected. The study utilized Harman's one-factor test and found that a single factor only explained 36.641% of the variance. Additionally, the high correlation among the factors (>0.90) may indicate the presence of the CMB [81]. Pavlou [82], while proposing various solutions to address the CMB threat in their study, regarded a correlation coefficient over 0.90 as indicative of considerable CMB. In this study, the correlation between the factors was determined to be less than 0.90, suggesting the absence of significant CMB.

3.1. Findings on Demographic Characteristics

Following the results obtained from the pilot study, a field study was conducted in October 2022 with 411 participants. The demographic characteristics of the participants are presented in Table 7. While 53.28% of the participants were female and 46.72% were male, it was found that most of the participants worked in-person, utilized Microsoft Teams for online meetings, and were employed in the human resources department.

Table 7. Demographic profile of the field research participants.

Characteristics	Group	*n* = 411	%
Gender	Female	219	53.28
	Male	192	46.72
Work model	Face-to-face	192	46.72
	Remote	48	11.68
	Hybrid	171	41.61
Most frequently used online meeting tool	Zoom	128	31.14
	Microsoft Teams	197	47.93
	Other	86	20.92

Table 7. *Cont.*

Characteristics	Group	*n* = 411	%
Department	R&D/Quality	37	9.00
	IT/Software	63	15.33
	Human Resources	128	31.14
	Engineering/Architecture	66	16.06
	Sales/Marketing/Customer Relations	40	9.73
	Administrative Affairs/Legal/Audit	36	8.76
	Other	41	9.98

It was found that the mean values of the expectation level, employee–employee interaction level, technological contribution level, perceived ease of use level, perceived usefulness level, and intention to use level demonstrated statistically significant differences among the work model group.

As a result of the LSD (least significant difference) test conducted to examine the source of the variation, a significant difference was found between the face-to-face employee group and the hybrid and remote employee groups. Hybrid employees have higher expectations than face-to-face employees. Nevertheless, face-to-face employees exhibit lower levels of employee–employee interaction, technological contribution, perceived ease of use, perceived usefulness, and intention to use than remote and hybrid employees.

3.2. Confirmatory Factor Analysis Results

Confirmatory factor analysis (CFA) was conducted to determine if the factor structure of the scale was confirmed. The path diagram for the confirmatory factor analysis is displayed in Figure 6.

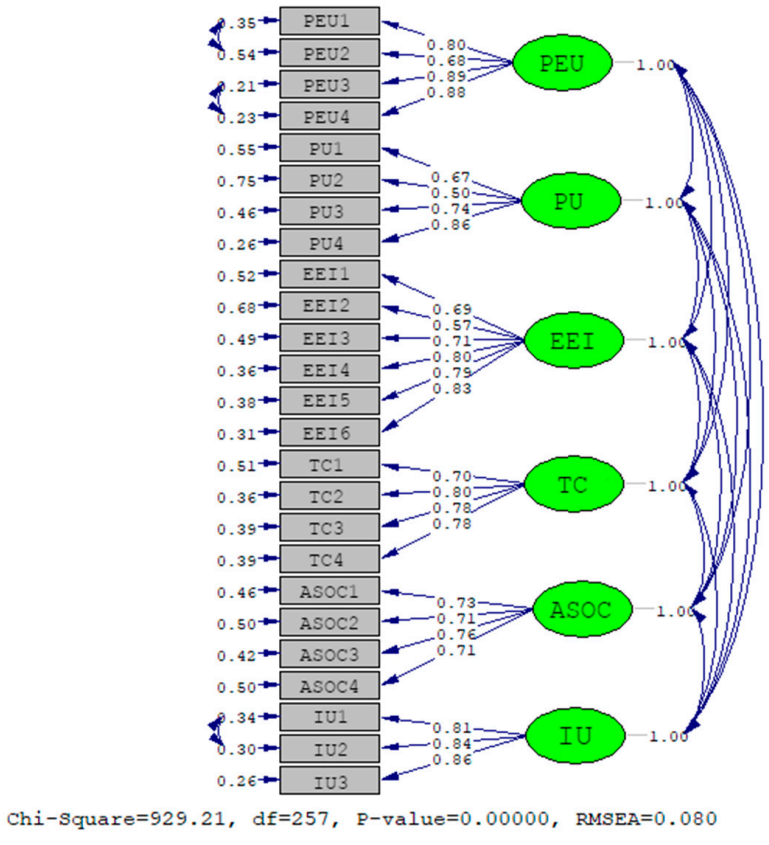

Figure 6. Path diagram of the confirmatory factor analysis.

According to the CFA results, the instrument's item factor loadings range from 0.50–0.88, which falls within the accepted limits. The correlations between items and latent variables were found to be significant (t > 2.58). Figure 7 displays the t-values of the path diagram.

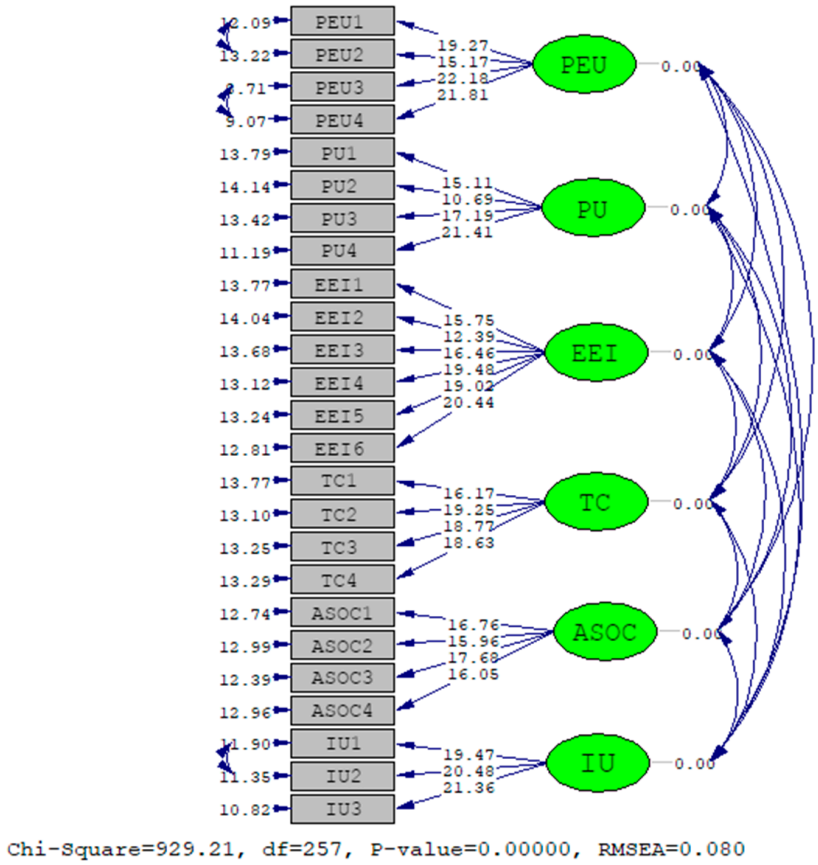

Figure 7. T-values of the confirmatory factor analysis.

When examining the path diagrams, modifications were required for the IOU1-IOU2, PEU1-PEU2, and PEU3-PEU4 items. It was found that the t-value of all scale items exceeded 2.58, indicating significant effects of the factor loadings on the scale dimensions with 99% confidence levels. Table 8 displays the fit index outcomes resulting from the CFA.

Table 8. Goodness of fit values for the CFA model.

x^2/df	RMSEA	CFI	GFI	AGFI	NNFI	NFI	RMR	SRMR
3.616	0.080	0.99	0.93	0.92	0.99	0.99	0.074	0.046

When examining the fit criteria values resulting from the CFA (Table 8), it was found that the ratio of x^2 value to df value was at the acceptable fit level with 3.616, the RMSEA value was at the acceptable fit level with 0.080, and the other fit values were within the perfect and acceptable fit values. This finding confirms that the scale's factor structure, which was developed as a result of the pilot study, is confirmed.

3.3. Descriptive Findings and Results of Relationship Analysis between Variables

The presentation of the descriptive findings of the instrument (Table 9) includes mean and standard deviation. Additionally, a Pearson correlation analysis was conducted to examine the relationship between the measurement tools.

Table 9. Descriptive findings of the instrument.

Dimensions	$\bar{x}$	s.d.
Expectations (EXP)	5.84	0.93
Employee–Employee Interaction (EEI)	5.79	0.97
Technological Contribution (TC)	5.87	1.00
Adaptation to Social and Organizational Changes (ASOC)	5.90	1.00
Perceived Ease of Use (PEU)	6.18	0.97
Perceived Usefulness (PU)	5.75	1.02
Intention to Use (IU)	6.07	1.02

As a result of the 7-point Likert scale developed in the study, a score range of 0.86 (6/7 = 0.86) was used to calculate the level of participants' responses. Accordingly, the range corresponding to each measurement level (1 being very low and 7 being very high) was calculated by adding a range of 0.86 points to the initial score of 1 point on the Likert scale. Based on this information, the levels of employee–employee interaction, perceptions of technology contribution, and adaptation to social and organizational change were found to be high among the participants. Additionally, their perception of ease of use was very high, while their perceived usefulness and intention to use were high as well.

When examining Table 10, it can be seen that there is a significant positive correlation amongst participants' expectation levels and their perceived ease of use, perceived usefulness, and intention to use. Additionally, a significant positive correlation exists between participants' intention to use and their perception of ease of use and usefulness. Furthermore, a significant positive correlation has also been established between participants' perception of usefulness and ease of use.

Table 10. Square root values of AVE and correlation values between dimensions.

Dimensions	EEI	TC	ASOC	PEU	PU	IU
Expectations (EXP)	0.961 **	0.944 **	0.913 **	0.814 **	0.835 **	0.827 **
Employee–Employee Interaction (EEI)	**0.735**	0.872 **	0.801 **	0.782 **	0.837 **	0.791 **
Technological Contribution (TC)		**0.768**	0.806 **	0.770 **	0.788 **	0.796 **
Adaptation to Social and Organizational Changes (ASOC)			**0.775**	0.743 **	0.717 **	0.748 **
Perceived Ease of Use (PEU)				**0.812**	0.804 **	0.784 **
Perceived Usefulness (PU)					**0.707**	0.765 **
Intention to Use (IU)						**0.837**

Note. Square root values of AVE are represented in bold, ** $p < 0.01$.

3.4. Convergent and Discriminant Validity

Convergent validity necessitates that the AVE value of each latent construct be greater than 0.5 and the CR value be greater than 0.7 [83]. By examining Table 11, it is evident that the lowest AVE value calculated for the latent constructs is 0.50 and the lowest CR value calculated is 0.79. These outcomes imply that convergent validity has been achieved for all latent constructs in the measurement model.

Table 11. Summary of AVE, CR, and Cronbach's alpha results.

Dimensions	CR	AVE	Cronbach's Alpha
Employee–Employee Interaction	0.86	0.54	0.925
Technological Contribution	0.85	0.59	0.928
Adaptation to Social and Organizational Changes	0.86	0.60	0.925
Perceived Ease of Use	0.89	0.66	0.957
Perceived Usefulness	0.79	0.50	0.903
Intention to Use	0.88	0.70	0.930

The Fornell–Larcker criterion is crucial to establish discriminant validity [38]. This criterion examines if the square root of the AVE for each latent construct is higher than the correlation coefficients between the constructs [83]. Table 10 displays the square root values of the AVE while the other values show the correlation coefficients between the constructs. While diagonal values are typically larger than correlation coefficients between constructs, this is not always true for every construct. However, because the model utilized in this study relies on a singular scale created by the authors, achieving both dependent and independent discriminant validity is not anticipated [84].

3.5. Path Analysis of the Proposed Model

The path diagram for structural equation modeling (SEM) to test the proposed model is presented in Figure 8, while Table 12 provides the outcomes of the research hypotheses.

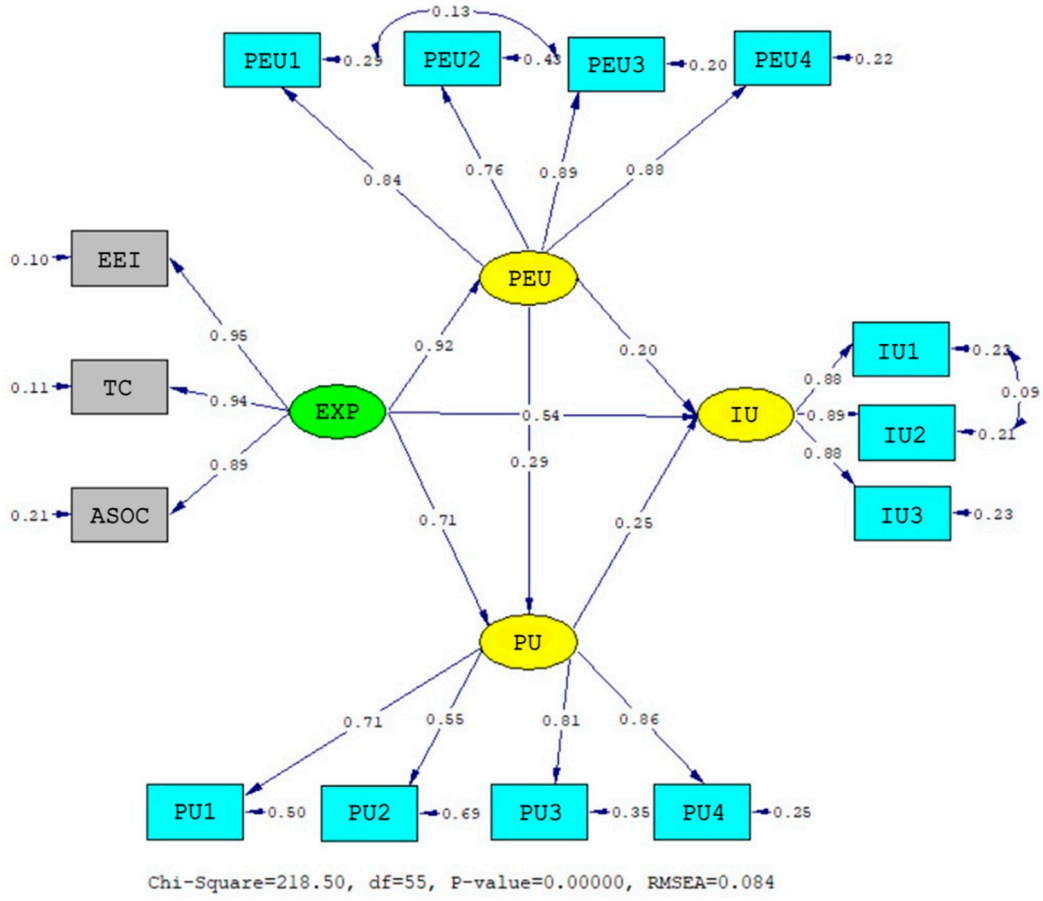

Figure 8. Path diagram of the proposed model using structural equation modeling.

Table 12. Results of the research hypotheses.

Path	β	t-Value	R^2	Durbin–Watson	Supported
H1: EXP → PU	0.71	12.66 **	0.50	2.04	Yes
H2: EXP → PEU	0.92	17.71 **	0.85	1.93	Yes
H3: EXP → IU	0.54	6.76 **	0.29	1.79	Yes
H4: PEU → PU	0.29	2.68 **	0.08	1.98	Yes
H5: PEU → IU	0.20	2.02 *	0.04	1.83	Yes
H6: PU → IU	0.25	2.11 *	0.06	1.88	Yes

* $p < 0.05$ ** $p < 0.01$.

Upon examining the fit index values resulting from the model, it was determined that the x^2/df value falls within the acceptable range of 3.972 (218.50/55) and the RMSEA value

also falls within the acceptable range with 0.084. Other fit criteria, such as CFI (0.99), GFI (0.92), AGFI (0.90), NNFI (0.99), NFI (0.99), RMR (0.079), and SRMR (0.058), fell within the acceptable and excellent fit range. The coefficient of effect in the model can be interpreted as a result.

Durbin–Watson values were assessed to determine whether there was autocorrelation present in each path coefficient of the model. Since these values fell between 1.5 and 2.5, it was concluded that no autocorrelation existed for each path coefficient.

The t-values signify the significance of the path (*p*-value) in a two-tailed test. The critical t-value for a significance level of 1% or 0.01 is 2.58, for 0.05 or 5% it is 1.96, and for a level of 10% or 0.10, it is 1.65. Upon analyzing Table 12, the findings indicate a significant positive relationship between the participants' level of expectation and perceived usefulness ($t = 12.66 > 2.58$). Specifically, an increase of one unit in expectation level results in a 0.71 unit increase in perceived usefulness.

The significant positive impact of the participants' level of expectation on their perceived ease of use was observed ($t = 17.71 > 2.58$). Similarly, a significant positive impact of the participants' level of expectation on their intention to use was identified ($t = 6.76 > 2.58$). Additionally, a significant positive impact of the participants' perceived usefulness on their intention to use was found ($t = 2.11 > 1.96$). Furthermore, a significant positive impact of the participants' perceived ease of use on their intention to use was determined ($t = 2.02 > 1.96$). The participants' perceived ease of use significantly influenced their perceived usefulness ($t = 2.68 > 2.58$).

4. Discussion

The coronavirus pandemic has forced organizations that had never previously considered remote work into this work model, giving managers and employees the opportunity to experience remote work firsthand. Today, as more employees opt to work remotely rather than in traditional office settings, they rely heavily on online meeting tools like Zoom, Microsoft Teams, and Google Meet to effectively connect, communicate, and collaborate with colleagues.

This study examined the adoption of online meeting tools, which play a crucial role in remote or hybrid work environments. The research question addressed in this study was: "How do employees' expectations and concerns regarding the use of online meeting tools influence their intention to use these tools?" The sub-questions necessary to answer the research question were as follows: (Q1) What are the expectations of employees regarding online meeting tools for work? (Q2) What are the concerns of employees regarding online meeting tools for work? (Q3) How do expectations and concerns regarding the use of online meeting tools influence attitudes toward them? (Q4) How do expectations and concerns regarding the use of online meeting tools influence the intention to use them?

The study addressed the main research question and objectives by investigating the expectations and concerns of employees utilizing online meeting tools in their workplace. Numerical data was then analyzed to determine the extent to which these expectations and concerns influence the intention to use these tools. To achieve this, a mixed methods research approach was employed; qualitative research was conducted first, followed by quantitative research. In the initial phase of the study, open-ended questions were utilized to recognize and evaluate the expectations and concerns of employees that influence their intent to use online meeting tools. Additionally, based on the findings, a theoretical technology acceptance model (TAM) was proposed. Subsequently, in the second quantitative phase, the proposed model was tested using structural equation modeling (SEM) and revealed the correlations between the factors.

During the qualitative phase of the study, we implemented four stages: qualitative data acquisition, text mining, accessing qualitative findings, and proposing a theoretical technology acceptance model based on the findings. The first stage involved conducting interviews with the developers of two popular online meeting tools in Turkey—Zoom and Microsoft Teams—using open-ended questions. Additionally, we interviewed decision

makers in 15 different organizations in Turkey to gather their insights on online meeting tools. We recorded and transcribed the interviews for analysis purposes. A qualitative analysis using QDA Miner software was performed on open-ended questions. Codes and categories were developed based on expectations and concerns. A theoretical technology acceptance model was established by associating these variables with existing models in the literature.

Based on the findings from coding the open-ended responses using QDA Miner software, employees expect online meeting tools in the workplace to facilitate collaboration and information sharing, enhance the working environment and improve work processes, adjust easily to social and organizational changes, increase productivity and efficiency, provide flexibility, contribute achieving the quality of face-to-face work while working remotely, and be user-friendly and easy to learn (Q1).

Based on the findings from coding the open-ended responses, it was concluded that employees are concerned that the use of the online meeting tool creates a sense of constant monitoring, increases their workload and performance expectations, affects the quality of work in an intensive technology environment, and complicates the process of measuring and evaluating employee performance (Q2).

In order to examine employees' attitudes and intentions to utilize online meeting tools, a model that incorporates their expectations and concerns with existing technology acceptance models (TAM) in the literature was proposed. Perceived usefulness and perceived ease of use dimensions were utilized rather than the attitude dimension. During the quantitative phase of the study, an instrument was developed to test the model proposed in the earlier qualitative phase. The resulting data was then analyzed through the use of structural equation modeling (SEM). Following the results obtained from the pilot study, a field study was conducted in October 2022 with 411 participants. While 53.28% of the participants were female and 46.72% were male, it was found that most of the participants worked in-person, utilized Microsoft Teams for online meetings, and were employed in the human resources department.

Based on the results of structural equation modeling, it is evident that employees' expectations regarding online meeting tools have a positive and significant impact on their perception of usefulness (H1) and ease of use (H2). A one-unit increase in expectation levels results in a 0.71-unit increase in perceived usefulness and a 0.92-unit increase in perceived ease of use (Q3).

The study found a significant positive relationship between employees' expectation levels towards online meeting tools and their intention to use the same (Q4). Specifically, a one-unit increase in expectation levels results in a 0.54-unit increase in intention to use (H3). When the perceived usefulness by employees improves by one unit, their intention to use increases by 0.25 units (H6). Likewise, when perceived ease of use improves by one unit, their intention to use increases by 0.20 units (H5).

When examining the demographic characteristics and scores of the participants using the measurement tool, no significant differences were found in expectations, perceived usefulness, perceived ease of use, and intention to use online meeting tools based on gender. There were no significant differences in expectations, attitudes, and intentions to use online meeting tools, such as Zoom and Microsoft Teams, among employees who currently used them and those within different departments. However, when analyzed further, it is evident that female employees, remote employees, and Microsoft Teams users have higher average scores for expectations, perceived benefits, and intent to use. Microsoft Teams users report higher levels of perceived usefulness and ease of use compared to the users of Zoom and other similar tools. The only significant differences were found between different working style groups. Remote and hybrid employees demonstrated higher levels of expectation than face-to-face employees, with remote employees exhibiting higher averages than their hybrid counterparts. Furthermore, perceived ease of use, perceived usefulness, and intention to use were lower among face-to-face employees in comparison to remote and hybrid employees. Although the frequency at which employees who have

returned to face-to-face work with the end of the pandemic continue to use online meeting tools in their work was not measured, it can be said that employees' intentions to use online meeting tools parallel those of remote workers.

4.1. Theoretical Contributions

This study's significant contribution is its revelation of the influence of expectations and concerns surrounding online meeting platforms on perceived ease of use, perceived usefulness, and behavioral intention within private companies. Some previous perceptions [38,41] have highlighted these external constructs as essential, but empirical investigations into TAM for online meeting tools had not been conducted. Additionally, this study validates the reliability and validity of TAM utilized in companies' online meeting tools. Finally, future research can take another step by examining individual, team, organization, and society factors in the acceptance of online meeting tools.

This study found that expectations influencing the intention to use online meeting tools in companies are grouped under the dimensions of employee–employee interaction, technological contribution, and adaptation to social and organizational changes. The benefits of working from home, such as increased productivity, fewer interruptions, convenience, flexibility, and time and money savings, have been identified by respondents in two related studies [67,72] and align with the expectations for online meeting tools in this study. Additionally, the performance and well-being [66], productivity [69], and socioeconomic impacts [73] associated with remote work, which have been extensively studied in the literature, also match the expectations. In the study [41] that explored students' usage of interactive video conferencing programs, perceived interactivity and facilitating conditions were analyzed as exogenous variables. The resemblance between the perceived interactivity dimension and the employee–employee interaction dimension in our research is remarkable.

This study indicated that concerns are grouped under the dimensions of perceived employee barrier, intense technology barrier, working life and work–life balance. Data and technology issues [72], effective communication [67], social interactions and isolation [71], work-related stress [65,68], overworking [67,70,72], family life [74], and video conference fatigue [75,76]—all of which are identified in the literature as cons of working remotely—overlap with the concerns about online meeting tools in this study. In a study [38] investigating the impact of social isolation, technostress, and personality on users' acceptance of online meeting platforms, the similarity of technostress to the intense technology barrier in our study, and the proximity of the social isolation variable to the adaptation to change variable in our study are significant.

This study's contribution to the literature is that increasing the intensity of expectations positively impacts perceived usefulness and ease of use, leading to increased intention to use the system. Expectations from online meeting tools are the primary factor influencing users' intent to use such tools, unlike previous studies [19,41], where perceived usefulness and ease of use were considered the most significant determinants.

Perceived ease of use is known to have both a direct effect on intention to use and an indirect effect on intention to use through perceived usefulness [27,28,30]. Previous research has indicated that the perceived usefulness of a product or service can significantly impact an individual's intention to use it [27,28]. Similarly, the study found a significant positive effect of the perceived usefulness and ease of use of these tools on employees' intention to use them. These results are consistent with studies [39,40] in the literature using online meeting tools.

4.2. Suggestions for Online Meeting Tool Developers and Managers in Companies

Information systems have long been utilized in various business processes, providing undeniable contributions and benefits. However, with the emergence of the pandemic, many businesses have rushed to incorporate online meeting tools without thorough research. As a result, decision makers in organizations have opted for various tools based on

their preferences rather than those of individual users. We expect the results of our study, especially from the qualitative phase, to provide valuable insights to software developers regarding which factors to prioritize. Moreover, when managers seek to integrate online meeting tools and optimize their use, they can benefit from the qualitative factors identified in this study. By learning how these factors impact the acceptance and sustainability of utilizing such tools, managers can develop informed policies and strategies.

To boost trust and confidence in online meeting tools, businesses must effectively present and promote the potential benefits of the system. Since employee–employee interaction is the primary factor that impacts expectations and perceived usefulness, online meeting tool developers should consider enhancing their platform to promote collaboration and information exchange.

Given the significant direct effect of expectations on the intention to use the system, as well as the indirect effects through perceived usefulness and perceived ease of use, improving software for employee–employee interaction and technology contribution factors, reducing the intensive technology barrier, and providing IT support for utilizing these tools will enhance their intention to use. Tutorials are necessary to address the usage of online meeting applications, including question and answer features and problem-solving capabilities, and to promote the ease of use for all users. It is imperative for online meeting application developers to ensure the security of the users.

To attain high-quality face-to-face work, companies should review and adapt their corporate culture to meet the demands of modern times and improve their business practices. Developers should provide technological contributions without compromising usability. Managers in companies should guarantee access to technological infrastructure and support their employees. Moreover, managers should recognize employees who experience technostress [38] and provide them with training and support.

The expectation level of the participants differs according to the working style, and it is seen that the expectation level of hybrid employees is higher than that of face-to-face employees. From this result, it can be said that although online meeting tools were used by companies out of necessity during the pandemic period, this situation has started to change. These businesses may have returned to their old working habits. This reminds developers that they need to develop new approaches to make these tools attractive to companies that have returned to face-to-face work. To fully leverage the advantages of remote work and utilize these tools, decision makers must welcome employee suggestions and guarantee their involvement in the decision-making processes [85].

4.3. Limitations and Further Research

This study is significant as it offers an employee-focused viewpoint of remote work and the utilization of online meeting tools. In order to uncover employees' intentions to use online meeting tools, this study focused on their expectations and concerns about this software. Conducting the study by obtaining instant perceptions over a certain period of time is a potential limitation, as these beliefs may change over time. Although online meeting tools are utilized globally, there may be cultural variances in dimensions such as "employee–employee interaction" and "perceived employee barrier". In this regard, testing the proposed model in different countries would be appropriate.

The model proposed at the end of the qualitative phase indicates that concerns impact perceived ease of use, perceived usefulness, and intention to use. However, the correlation value of the items in the questionnaire used for the concern factors was below 0.30, leading to their removal from the scale [77]. As a result, assessing the effect of concern factors was not possible.

The lengthy study period and costly data acquisition process associated with mixed methods research can be considered a limitation. Thus, conducting project-based research involving researchers from different cultures may be a more efficient means of revealing adaptation and continuity in the use of online meeting tools.

Further research could employ alternative samples, methodologies, and analytical techniques to investigate corporations' utilitarian reasons for implementing online meeting tools. Future studies could examine the alternative technology acceptance models mentioned in this paper. Antecedents from different acceptance models, such as UTAUT2 [31], could be integrated with the expectancy and concern factors from the qualitative stage. This would result in a more comprehensive understanding of employees' perceptions, attitudes, and intentions towards the use of online meeting tools in companies. Investigation into organizational control and demographic variables, including but not limited to gender, working style, and software utilized in research models, can also be conducted to assess their impact.

Organizational control can be studied through analyzing research that considers changes in telecommuting monitoring processes and procedures, managerial control of remote workers, and the impact of online meeting tools on their usage intentions. Any new factors can be obtained from these studies.

5. Conclusions

The COVID-19 pandemic has sparked a global health crisis, while also triggering significant technological, social, and cultural shifts. Businesses worldwide have been forced to reevaluate their standard modes of operation and software utilization, subsequently undergoing a rapid shift towards remote working. This transition is poised to have enduring implications for the way work is conducted in the foreseeable future. With the pandemic in the rearview, some previously office-bound employees are now working remotely, while others are embracing hybrid models that encompass a mix of office and remote work. This present moment offers a singular chance to gain insight into the nature of remote work, establish remote support for various business operations, and employ lessons learned from remote work to enhance in-office and hybrid environments.

The use of technology is influenced by the attitude of the user, which can be positive or negative based on their evaluation of the behavior. Expectations of the outcomes following technology use also shape attitudes towards this behavior. The technology acceptance model (TAM) proposes that beliefs regarding the perceived ease of use and perceived usefulness of the system influence attitude [27,28,30]. Perceived usefulness and perceived ease of use, which represent attitudes, are determined by expectations and concerns about the system in this study.

The study aimed to investigate how the usage behavior of online meeting tools among employees is influenced by their expectations and concerns. The employees' expectations and concerns regarding the system significantly impact their attitude towards the perceived ease of use and usefulness of the system. Additionally, these factors directly affect their intention to use the system, which is an indicator of their readiness to perform the behavior of using the system.

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