



# The Influence and Continuance Intention of the E-Government System: A Case Study of Community Water Supply Business

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The e-Service system is utilized in government administration to help achieve efficiency and provide people with services that meet their needs. This service is also known as e-Government. This article discovers the actual impacts and examines the paper to identify the underlying factors affecting the government's e-service system. The Administration created it to help achieve efficiency and provide people with services that meet their needs, also known as e-government. In addition, it leads to an increase in participation in the equity of the distribution of social benefits. This research examines the essential aspects that influence a community's perception of E-Government Continuance Intentions Toward E-Services. A questionnaire with a five-point Likert scale was issued to 1,000 community water consumers, and the researcher received 627 valid responses. Data were collected using a simple random sampling technique with a sampling ratio of 14 villages. Subsequently, descriptive statistics characterize the data (frequency distributions, percentages, averages, medians, and standard deviation). Furthermore, PLS-SEM was utilized to study the interactions between variables and launch the conceptual model via partial least squares (PLS) path modeling. This research demonstrates that digital technologies are critical to boosting community expectations and satisfaction with e-Services. Numerous factors contribute to its growth. Moreover, this paper presents an excellent case study approach based on expectation confirmation theory for examining people's community participation behaviors regarding e-services. In addition, community water consumers participate in electronic services by confirming their expectations with satisfaction.

**Keywords:** government services, public e-services, continuance intention, participation intention, Expectation Confirmation Theory, Commitment-Trust Theory, community water supply business

## 1 INTRODUCTION

Numerous countries have concentrated their efforts on offering government services via electronic networks in the modern era (e-government). Participation is a critical aspect of governance and a tenet of sustainable development (Abbas et al., 2019a). This is demonstrated by the results of the (United Nations, 2020) E-Government Survey, which addressed 'E-participation'. People require rapidly evolving information and communications technology (ICT) in the modern era, particularly because an increasing number of customers rely on online platforms in their daily lives, whether for

purchasing goods and services, education, communication, or work. A survey of 193 countries found that e-government or e-service performance increased the efficiency of public service operations, which is defined as the management of various government services to the public through on-line channels. To expand channels for people to easily contact and request government services. These e-services enable customers to receive numerous services conveniently, swiftly, and affordably, as opposed to traveling to the agency or office. Electronic services contribute to the reduction of gaps and disparities in access to information and government services. Additionally, (Awan et al., 2018), work has made a significant contribution to the field by demonstrating that commitment has a beneficial effect on social sustainability performance and contributes to the ongoing discussion on relational governance and its potential to aid in achieving sustainability. In addition, the government can thoroughly clarify and disseminate the information necessary to get services from the public. Similarly, The study by (Azizi et al., 2021) has shed more light on the appropriate strategies will improve mental well-being, satisfaction, and productivity, and employee motivation. According to (Layne and Lee, 2001), whenever people use the e-Service, the system saves all the details in an online format, which facilitates inspection and saves time documenting. Government officials also leverage modern technology, particularly in public services, to deliver them more efficiently and effectively to the public. Thus, e-services can continue to grow while meeting people's requirements, and at the same time, people expect these services to suit both their own and others' needs (Bertot et al., 2010). Furthermore, the expectation of total access to a variety of different forms of information is lowered. Not only that, the economic impact of e-services on consumer demand and behavior is not limited to the private sector. However, electronic services result in higher expectations for government services. As a result, digital technology and the expansion of public services through social networks are critical. The public sector must adapt and place a higher premium on timely responses to the demands and behaviors of individuals and other groups (West, 2004). This research focuses on the e-participation of community water users in support of the continued intention of government e-services, which is viewed as a critical basic government function that currently has only a few e-services and receives little government attention, despite the fact that water is a necessary component of daily life and cannot wait for official days and times to work. A significant part of this problem is that the few channels available for individuals to connect with e-services and contact the government continue to rely on traditional webforms that are not interactive. Additionally, government officials continue to require hard copy documents in a multistep process and provide services on official days and hours that are incompatible with the current technological context, in which e-services are possible or it is more efficient to construct and upgrade with current technology and social networks. Further, "Technology" poses a significant threat which (Mansoor, 2021; Sukma and Leelasantitham, 2022) defines social networks as a kind of governance by defining it as the process of selecting, holding

accountable, and removing government officials; protecting individual rights and the government's ability to formulate and implement policies. When e-government is effective, it satisfies the demands and concerns of its citizens. Thus, successful e-Governance requires a strong technological foundation.

The purpose of This research examines the essential aspects that influence a community's perception of E-Government continuance intentions toward E-Services, including the expectation confirmation theory (ECT), and the commitment trust theory (CTT). By the way, no previous study has examined every key aspect of a single work environment. Furthermore, researchers discovered multiple previously undiscovered correlations between four factors: social media, transparency, governance, and stakeholders, all of which increase community water users' expectations and satisfaction, greatly increasing the value of e-services or e-government. As a result, the following research question has been formulated.

RQ1: What factors influence the intention to continue with e-government of community water users toward e-service?

RQ2: Can technology and social media enhance the continuance of e-government use?

To address the research issue, the researchers conducted a review of the current literature and the study's theoretical premises. The research model and hypotheses are then detailed. Subsequently, the researchers experimentally validated the proposed model by applying it to a large data set that we have assembled. Finally, the researchers discuss how their research contributes to the development of theory and attempts to increase our understanding of how technology can alter expectations and satisfaction among village residents who use community water.

## 2 LITERATURE REVIEW

This section discusses the various modes of community water supply business and stages of development. That can be grouped into three categories, the gaps in each being examined, and the underlying source of the problem being outlined in Part 1. According to the examination of literature and the four theoretical foundations employed in this study, e-services are intriguing, since the government currently has various constraints on services. This will be done chronologically and will include a synopsis of key points from each theory covered in this study.

### 2.1 Community Water Supply Business

This section has a literature review on community water supply businesses has been carried out. To begin with, public utilities are managed according to a more conventional paradigm, with the government building and overseeing all towns. It is a kind of bureaucratic administration characterized by an extremely complex organizational structure. Additionally, (Banister, 2014), says that central government regulations were incompatible with the context of each place, preventing the

community water supply system from addressing the community's intended concerns. As stated by (Schweitzer and Mihelcic, 2012), a management problem is one in which power and duties are exercised in order to benefit certain groups of people in order to acquire preferred access to water. Second, privatized utilities are those that receive government subsidies and are operated by private businesses. The advantage is that the organization is very adaptive and self-sufficient. On the other hand, (Leviäkangas et al., 2015), identified pricing transparency difficulties and a lack of public sector checks and balances, leading to individuals not obtaining fair access to water and selling at prices we could not verify. If this is the case, private companies can set water supply prices without seeking a better deal from the public sector. Third, PPPs (public-private partnerships) are a cutting-edge management paradigm that is well suited to large-scale infrastructure and public service projects across a range of sectors. Operational expenses are high and may be inadequate if the public sector finances them entirely. However, one of these joint ventures has several disadvantages, one of which is governance. Organizing formal investment initiatives is more difficult than negotiating with state companies. In order for PPPs to work, they must have a well-thought-out and well-executed strategy. This is because risk must be shared between the public and private sectors (Romano et al., 2017; Li et al., 2020).

The purpose of this study was to identify strategies to bridge the gaps between current traditional governance services and technological channels related to the expectations and sustainability of community water users, with an emphasis on the extent to which community water users can participate through electronic services. Due to the increased accessibility of e-services and social networking, the way online communities encourage people to join has changed.

## 2.2 Commitment-Trust Theory (CTT)

When it comes to long-term business partnerships, the commitment-trust concept seeks to explain how they develop. Commitment is described as the parties' "persistent desire" to maintain a meaningful and vital connection (Moorman et al., 1992). In other words, it is a collection of requirements to maintain a desired connection and prevent a relationship breakup. Confidence in honesty and integrity is a broad term that refers to when one party has trust in honesty and integrity. (Morgan and Hunt, 1994). identified five antecedent variables (costs and benefits of relationship termination, shared values, communication and opportunistic behavior) and five outcome variables (acquiescence, proclivity to leave, cooperation, functional conflict, and uncertainty of decision making), with commitment and trust serving as key mediators between the antecedent and outcome variables. Additionally, in competitive circumstances, rapid trust and mistrust boost collaboration by rapidly building trust and distrust. In addition to that, (Schiffeling et al., 2020), established a link between social presence, trust, and participation. (Morgan and Hunt, 1999). provide an assessment of the commitment-trust basic in the business viewpoint that has aligned relationship marketing, despite the fact that the notion is not new. It requires three interdependent sets of traits to be successful: economic advantages, practical cooperation, and the preservation and long-

term sustainability of these connections. Consider the relationship-based competitive advantages (RBCAs) associated with establishing connections to understand what I mean. The following is a synopsis of what was identified during a study of pertinent literature: Also, several gaps have been identified in earlier research on trust-commitment theory. It is clear that no research has been done on the factors in the water supply industry that make it easier for people to work together.

This is the first and most extensive study to examine the water supply sector entirely. The phrases "social networking," "stakeholder," "governance," and "transparent" were developed using a variety of concepts. When two theories are combined, expectation confirmation theory (ECT) and commitment trust theory (CTT), most importantly, no study has been conducted to determine the degree to which water users can engage via e-services. Because today, social media has become more accessible, the way online communities encourage users to participate has changed a lot.

## 2.3 Expectation Confirmation Theory (ECT)

(Oliver, 1980) established the ECT theory to investigate post-purchase behaviors such as repeat purchases, complaints, and service marketing. It is often used in market research to assert that customers will form expectations before purchasing a product and will develop knowledge of the product's real effectiveness after usage. If the expectation is fulfilled, the condition is satisfied. If an expectation is not met, it will remain unfulfilled. ECT theory is often utilized to extract meaning and create predictions. As shown by (Anderson and Sullivan, 1993), consumers are satisfied and want to buy again. Repeat purchase intent is determined by past satisfaction. Consumer satisfaction is considered critical to establishing and maintaining long-term customer loyalty. This idea was very predictable. (Oliver, 1993). shows that individuals repurchase a variety of different goods and services. These include the purchase of a multi-cycle automobile, the acquisition of a video camera (Spreng et al., 1996), and the management of the restaurant for future usage by customers (Swan and Trawick, 1981). Furthermore, it refers to expectations as a factor in customer satisfaction choices. This is because service expectations are used to determine how long customers will consider a product or service before repurchasing it (Bhattacharjee, 2001). ECT outlines a product's or service's repurchase expectation and its confirmation or denial depending on the product's or service's performance, which may affect customer satisfaction (Shareef et al., 2019). ECT has been used in a variety of products and sectors, including online banking information systems (Bhattacharjee, 2001) and restaurants (Lee and Kim, 2020). Consumers have expectations about items or services, and then their actual use of these products or services enables them to validate or refute these expectations (Lee and Kim, 2020). If the product or service's actual performance surpasses the expectation, the expectation is verified. Likewise, (Liu et al., 2021), results contribute to our understanding of business organizations' actions are essential in times of crisis. resources, entrepreneurial factors, dynamic talents, creativity, and practical tactics help firms survive crises.

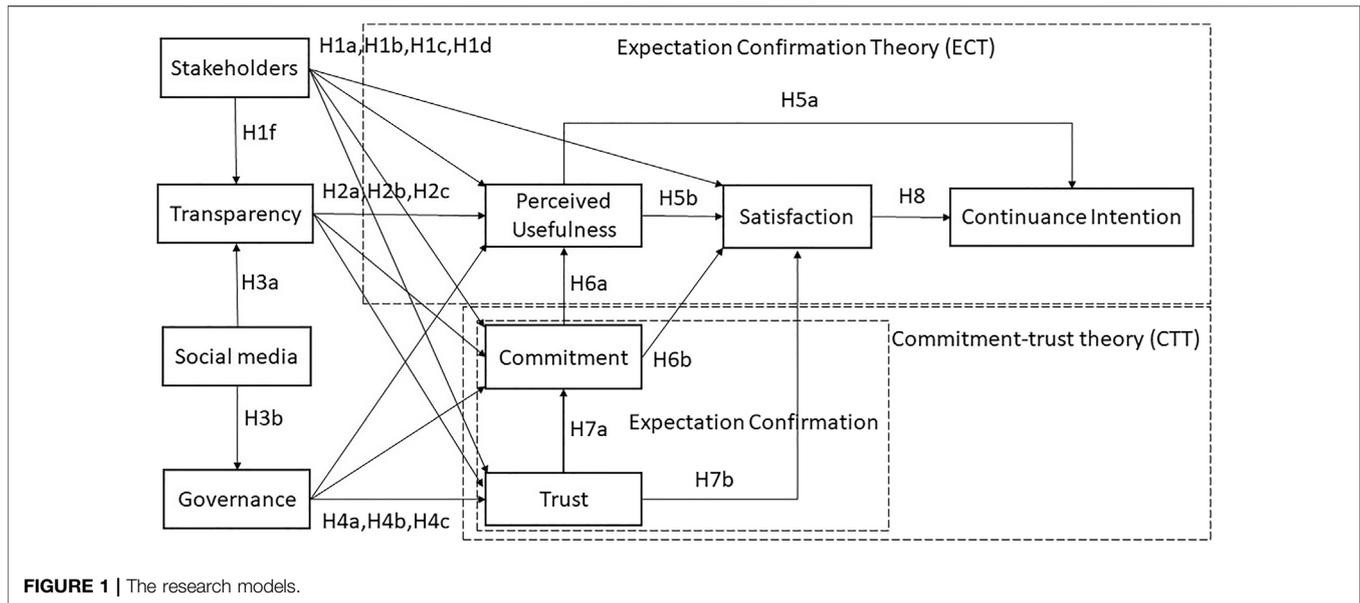


FIGURE 1 | The research models.

According to the review of pertinent literature which indicates that ECT has never been investigated in a community water system, this study is the first to extend ECT to a community water system. It should be disputed with the commitment-trust theory, which is also the first study of its kind on trust and commitment structures. This research developed four new fundamental conceptions of IS participation theory and social exchange theory: social media, governance, and stakeholders. These were chosen because it is critical for government communication that people have easy access to social media and can learn about what the government is doing.

### 3 RESEARCH MODEL AND HYPOTHESES

As previously discussed in the introduction and theoretical sections, the current community water supply system has encountered a dearth of channels for individuals to connect to e-services and contact the government, with individuals continuing to rely on static webforms. To begin, all organized public, private, and public-private partnerships have their own set of benefits and drawbacks. They provide few possibilities for technology or e-services channels, and government officers continue to require hard copy documentation in a multistep procedure and provide services on incompatible official days and hours with the present technological context. Second, a research model was created to examine the continuum intention of E-participation community water users toward E-Services through the lens of expectation confirmation and Commitment Trust Theories, which include four new constructs (stakeholders, transparency, social networks, and governance) that reflect the intention of E-participation and the continuum intention of E-Services (see **Figure 1**).

This study will test 20 hypotheses to address the challenges listed in the research question by analyzing four aspects derived

from the review of the literature: stakeholders, transparency, social networks, and good governance using an integrated model including ECT and CTT as the two main theories. Consequently, we expect to create a model for the existing e-services of government administration that would provide superior service and quicker replies. Through a well-managed and controlled trust information management system, this model must be extremely dependable and capable of being audited for transparency by relevant parties.

#### 3.1 Stakeholders

According to stakeholders or participants, an actor's influence within a network depends on the other actors' dependence on the resources they manage (Hein et al., 2017). Besides, according to the IS participation theory, stakeholders are a factor in the success of an information system. Participants are subgroups of stakeholders who are invited to participate in creating and implementing the solution. Participants and stakeholders may vary in several ways. Similarly (Markus and Mao, 2004), it might be tough to pick appropriate individuals from the makeup of the participating group. The work by (Abbas et al., 2019b; Abbas et al., 2020) suggests multiple stakeholders are also becoming more common in a new business model called the local innovation business model, which is used in the community energy sector as has studied by (Abbas et al., 2019b; Leelasantitham, 2020; Abbasi et al., 2021). There may be a link between solution development success and solution implementation success. Additionally, stakeholders are essential success elements because they produce substantial new information and insights about the conditions, constraints, and opportunities of other stakeholders. Thus, we have the following hypotheses:

ST:

- H1a, H1b, H1c, H1d, H1f, stakeholders positively influence satisfaction, perceived usefulness, commitment, trust, and transparency.

### 3.1 Transparency

According to a review of the literature, a key challenge in the management of the water supply company is ethics, with social and legal difficulties that are inextricably linked to ethical issues. To address this problem (Lockwood, 2010), we found multiple publications suggesting that incorporating openness, good governance, and social networks into the management process could help resolve ethical difficulties and increase trust (Bertot et al., 2012). According to fascinating research (Norman et al., 2010), a leader's optimism and transparency increased followers' perceptions of trust and evaluations of the leader's effectiveness. Numerous positive relationships between transparency and trust have been established to promote confidence in a leader or organization and to illustrate that an ethical dilemma such as this can be resolved through good administration. Therefore, the study considers transparency to be critical. We thus have the following hypotheses:

TA:

- H2a, H2b, H2c, Transparency positively influences perceived usefulness, commitment, trust.

### 3.2 Social Network

A social network can be defined as a series of relationships between individuals, objects, and events; different networks can be formed using the same elements due to various relationship types. (Sykes et al., 2009). A business implements an information technology system; network centrality is a critical component. Individuals residing in the network center can direct the flow of resources and associated knowledge. An individual is not affected by others; instead, he or she exerts influence over individual power and resource control within an organization. In 1974, (Czepiel, 1974), began applying social network concepts to an organization's technology innovation diffusion model. Also, in various studies (Tsai and Kang, 2019), social exchange theory is used to describe how social networks work in exchange for social advantages and community support. More crucially, several positive links were discovered between the commitment-trust theory and the Social Exchange Theory for co-creating brand value in the social commerce community. Businesses are increasingly using social media to promote their products and services. As a result, social networks are considered relevant for the study. Hence, we set the following hypotheses:

SO:

- H3a, Social Network positively influences transparency
- H3b, Social Network positively influences governance

### 3.3 Good Governance

Governance entails the appointment, accountability, and removal of government officials; the safeguarding of individual rights; and the government's capacity to formulate and implement policies. There is no such thing as universally sound governance, nor is there a one-size-fits-all solution. These are indicators: involvement, compliance with the law, accountability, transparency, responsiveness, and openness. Citizen participation in government selection is a crucial component

of democracy. Participation, as defined by (Woods and Narlikar, 2001), is good governance that necessitates a vital signal. The term "the rule of law" refers to this. Ethics-related research has long been seen as a crucial component of democratic administration and necessary for creating public confidence. Because the study examined citizens' perceptions of good governance, citizen trust, and unethical behavior, the findings may be useful for both research and policymaking that investigates good governance and unethical behavior related to trust. Additionally, the study (Mansoor, 2021) shows unequivocally that social networks have a direct impact on trust in the current pandemic state. As a result, the media are critical in establishing public trust and ensuring governance compliance (Shanka and Menebo, 2021). Effective governance methods contribute to the public's increased faith in government. The findings established a direct and indirect causal link between outstanding governance practices and public trust in government. As a result, the following possibilities are proposed:

GO:

- H4a, H4b, H4c, Governance has positive influences Usefulness, commitment, trust

### 3.4 Perceived Usefulness

It is a component of ECT and has been used in a number of research projects, including those involving online commerce and the continued intention of the online Web (Hong et al., 2017). As part of (Ching-Ter et al., 2017) investigation into the user's continuous intention toward the web portal, also used playfulness to extend her experimental design (ECT). Users' intentions to return to a website are substantially influenced by factors such as playfulness, satisfaction, perceived usefulness, and customer satisfaction. Another study (Li and Liu, 2014) found that ECT spreads primarily through word of mouth among patients. The findings demonstrated that the perceived utility and enjoyment of the product have a favorable impact on the user's intention to continue using the product in the future. Word-of-mouth (WOM) behavior is also positively influenced by the perceived utility of the product and the user's intention to continue using it. The expectation confirmation construct, perceived utility, satisfaction, and continuation intention are the four primary constructions of ECT. During actual use, confirmation is defined as the extent to which a user thinks that their initial expectations are being confirmed in the manner in which they were initially expressed. Because of this, in the post-adoption context, explain that users' expectations evolve as a result of their experience and that post-adoption expectations will be based on the users' real usage experience. A second significant element in expectation conformation theory is perceived utility. According to (Venkatesh et al., 2003), when looking at user behavior at both the initial and post-adoption stages, perceived usefulness is found to be a stable variable. In a previous study, people's perceptions of the usefulness and satisfaction of items have been shown to be significantly influenced by confirmation of expectations. Thus, we have the following hypotheses:

PU:

- H5a Perceived Usefulness has positive influences Continuance Intention
- H5b Perceived Usefulness has positive influences Satisfaction

### 3.6 Commitment

Not only does trust have a direct effect on the quality of relationships, but it also has an indirect effect through relational commitment (Morgan and Hunt, 1994). Commitment to a relationship is a term that refers to an individual or organization's continual desire to maintain a mutually beneficial trade relationship (Park et al., 2012). Commitment to a relationship arises when an exchange partner believes that maintaining the relationship is critical and will require the greatest effort or commitment (Hoppner et al., 2015). It is crucial to keep in mind, however, that not all social interactions culminate in trusting, committed partnerships. To encourage commitment, the exchange partner must regard the connection as substantial and worthwhile. That is, the exchanged resources must add concrete value to the exchange partner to be justified. Several studies have explored the commitment and trust in higher education, albeit with a limited sample size. Student commitment to their institution is determined by perceived benefits of attendance, perceived similarity between the school and students, faculty-student trust, and the quality of communication between students and the institution, according to (Melewar et al., 2017). This contributes to our understanding of how relationships and communities affect customer engagement behavior. The findings will contribute to a better understanding of how to structure service organizations to maximize service value and brand loyalty over time. Additionally, social networks alter the dynamic between trust and commitment (Bao and Wang, 2021). As a result, hypotheses are expressed as follows:

CO:

- H6a, Commitment positively influences perceived usefulness
- H6b, Commitment positively influences Perceived Satisfaction

### 3.7 Trust

According to trust-commitment theory and related research, trust is necessary for the effectiveness of long-term relationships. Furthermore, (Moorman et al., 1992), have been associated with other desirable attributes such as consistency, competence, honesty, fairness, accountability, helpfulness, and compassion. Individuals and institutions that exhibit these characteristics are more likely to be viewed as trustworthy. This results in the formation of stronger interpersonal ties, a greater likelihood of reciprocal "good faith" behavior, and, ultimately, a greater likelihood of building high-quality relationships. According to (Achrol, 1991), in higher education, new students view students who receive trust directly from institutions via social media as trustworthy.

Nonetheless, trust is impacted by an individual's faith in the government, which is decided by the importance of event attachment in creating ties between them. Their faith in the government encapsulates their support (Ouyang et al., 2017). Emotional reactions to a particular incident have an effect on their actions, attitudes, and support. The social exchange theory and research on its application show how rewards, costs, and trust affect solver participation. Numerous studies have proven a link between the notion of social exchange, involvement, and trust. The following hypothesis is stated in this manner:

TR:

- H7a, Trust positively influences Commitment
- H7b, Trust positively influences Satisfaction

### 3.8 Satisfaction and Continuance Intention

Satisfaction is an emotional consumer state associated with a particular service that has an effect on a customer's motivation. Once community water users have had a positive E-Participation experience, their desire to utilize E-Services is enhanced, resulting in their sustained usage. If community water consumers are happy with E-Service based on prior use, they will develop a high degree of confidence and continue to utilize it (Rahi and Ghani, 2019). People who are happy with an information system are more likely to continue using it, according to (Lin et al., 2009) studies. When customers are satisfied with a service, they are more likely to be motivated by their own intrinsic interest in the service, its importance, the avoidance of guilt, feelings of worth, and compliance with rules and avoidance of punishment (intrinsic regulation), among other self-determined motivational factors (Rahi et al., 2020). This is the most self-determined kind of motivation and is related to actions undertaken with the sole purpose of providing enjoyment, interest, and satisfaction to community water users. Previous studies have shown a favorable correlation between contentment and intrinsic motivation. Introjected regulation was positively associated with increased effort expenditure, but it was also associated with increased anxiety and worsening of failure management. Identified regulation is a kind of extrinsic motivation that may be defined as a largely autonomous regulating style, as shown by the acceptance of E-Participation.

Continuance intentions are any activities that generate intrinsic interest in the client, such as novelty, difficulty, or aesthetic significance, that will motivate them to do more of them. This shows that internal control has had a positive impact on their future goals and behavior (Wu and Chen, 2017). In order to discover new motivational behaviors, we must first understand the dynamics of extrinsic motivation. For example, "recognized regulation" occurs when a person acquires an appreciation for behavior as a result of specific external stimuli and the behavior becomes entirely integrated into the self as a result (Hong et al., 2017). When it comes to e-participation, one must have the personal goal of becoming familiar with e-services. Only then will people be more likely to look up and use government websites (Veeramootoo et al., 2018). Another example of an extrinsic motivator is self-regulatory conduct connected with ego involvement, in which individuals are motivated to

demonstrate their ability to sustain attitudes of value. External regulations are the least autonomous subset of extrinsically driven actions. These activities are carried out in response to an external demand or incentive and may be referred to as the most self-determined type of extrinsic motivation. Numerous studies have shown that consumers who are motivated by something other than themselves are more likely to continue using those services. As a result, hypotheses are expressed as follows:

SA:

- H8, Satisfaction positively influences continuation intention

## 4 RESEARCH METHODOLOGY

### 4.1 The Scope of Survey

According to the population statistics report for 2021, almost 80% of the residents of Nakhon Phanom province used community water supplies. Additionally, the report stated that the Phanom district was experiencing issues with the quality of water used for domestic use, particularly in the Na Thon Subdistrict (2,584 houses), which is not served by the Provincial Waterworks. A simple random sampling approach was adopted for this study based on the sampling ratio of 14 villages (every village in Na Thon Subdistrict was sampled), which included all samples living in the study region for at least 12 months. This means that samples were taken from all communities in the Na Thon Subdistrict. The questionnaire (see **Supplementary Material**) was used to collect data from individuals who expressed an interest in participating.

### 4.2 Questionnaire Design

The questionnaire consisted of 27 items extracted from the relevance synthesized in 9 constructs. Each family was instructed to return it to a return box located in an easily accessible location, such as the village multipurpose facility. The Taro Yamane formula was used to determine the required number of samples. It considered 2,584 homes and the allowable margin of error,  $e = 0.05$ . According to estimates, the sample size should have been 347 respondents, which is what was required to collect this research, but thanks to the incredible participation of communities, we received 627 respondents (180%), providing sufficient data to proceed to the next level to evaluate the model and the research hypothesis. The research model's hypotheses are demonstrated quantitatively. The following sections comprise the following questions: Gender and age (in years), degree of education, and the time they want to use the common water supply must be provided. Factors affecting the degree to which thriving communities collaborate How well communities collaborate is contingent upon how well communities collaborate.

### 4.3 Data Testing and Institutional Review Board: IRB

Data collection is done through surveys. Individuals in the community can complete them and return them at a suitable time. This study sampled fourteen villages, one from each village

in the Na Thon Subdistrict. The number of villages selected was determined by the number of residents in the research region for at least 12 months. To guarantee that all questions are legitimate, the Ethics Review Committee of Mahidol University considered study methods and research equipment. The Institutional Review Board of Mahidol University authorized the questionnaire and assigned it the approval number COE No. MU-CIRB 2021/249.2709. The original document was printed in 1,000 copies and delivered to each household's mailbox on even-numbered days between October 1 and 31 October 2020, following pilot testing and refinement to ensure the questionnaire was accurate. The sampling ratio for each village in the study area was derived from the sample size of all residents in the study zone. Participants in this study completed 627 questionnaires. They double-checked to ensure that they were all correct.

### 4.4 Statistical Data Analysis

The questionnaire data was imported and cleaned up for use in the structural equation modeling (SEM) testing process. It will be utilized to perform Partial Least Squares-Structural Equation Modeling (PLS-SEM) using the SmartPLS 3.3.0 software (Ringle et al., 2015), as described in **Section 5**. Following the collection, processing, and analysis of questionnaire data in **Section 5**, the final step of the research is to examine descriptive and inferential statistical analysis, which will be reviewed and explained in **Section 6**. Then they will be more comprehensible and precise. In order to assess the reliability and validity of the research model and questionnaire, SmartPLS is being utilized to assess some of the least square data sets that have been obtained. Specifically, this approach was selected for this inquiry because it is an element-based statistical tool for creating causal models that may be applied to the research topics under consideration (Tenenhaus et al., 2005). The PLS is a structural equation modeling approach that evaluates both measurement data and structural models in a single phase, saving time and effort. Compared to covariance-based SEM approaches such as LISREL, we chose PLS since it needs a lower sample size and indicator distribution, while also being more accurate in its estimations (Hair et al., 2011; Hair et al., 2019; Hair et al., 2021). An iterative two-stage data analysis approach is used to analyze the reliability and validity. The first stage analyzes the measurement model's reliability and validity of the measurement model. Then, the structural model is tested to see whether it can represent a hypothetical connection as closely as possible.

## 5 RESULTS

In order to assess the reliability and validity of the research model and questionnaire, SmartPLS is being utilized to assess some of the least square data sets that have been obtained. Specifically, this approach was selected for this inquiry because it is an element-based statistical tool for creating causal models that may be applied to the research topics under consideration (Tenenhaus et al., 2005). The PLS is a structural equation modeling approach that evaluates both measurement data and structural models in a single phase, saving time and effort. Compared to covariance-

**TABLE 1** | The demographic data of main testing respondents, Total ( $N = 627$ ).

Characteristics	Values	Frequency	Percent (%)
Gender	Male	269	42.9
	Female	358	57.1
Age (years)	18–30	101	16.1
	30–40	182	29.0
	41–50	187	29.8
	>50	157	25.0
Education	< bachelor	446	71.1
	bachelor	148	23.6
	> bachelor	33	5.3
Community water usages (years)	<5	38	6.1
	5–10	128	20.4
	11–15	79	12.6
	>15	382	60.9

based SEM approaches such as LISREL, we chose PLS since it needs a lower sample size and indicator distribution while also being more accurate in its estimations (Hair et al., 2011; Hair et al., 2019; Hair et al., 2021). An iterative two-stage data analysis approach is used to analyze the reliability and validity. The first stage analyzes the measurement model's reliability and validity of the measurement model. Then the structural model is tested to see whether it can represent a hypothetical connection as closely as possible.

## 5.1 Descriptive Analysis

We used the same age grouping for the sample as (Paulson et al., 2021) for the entire population (see **Table 1**) the demographic characteristics of the 627 consumers of community water supply. At the same time, men accounted for 42.9% of the population, while women accounted for 57.1 percent. Following that, it was determined that the respondents were most likely to be 41–50 years old, accounting for 29.8 percent, 30–40 years old, accounting for 29.0 percent, over 50 years old, accounting for 25.0 percent, and 18–30 years old, accounting for 16.1 percent. When the level of education of the sample group was assessed, it was determined that the majority, 71.1 percent, had less than a bachelor's degree. This was followed by a group of individuals with a bachelor's degree (23.6%) and those with higher education (23.6 percent) (5.3 percent). Finally, when the results of community water supply survey were assessed in terms of years of use, it was observed that those who had used community water for more than 15 years had the highest rate, 60.9 percent. The group that had been using community water for 5–10 years had the highest rate (20.4%), followed by the group that had been using community water for 11–15 years (20.4%), and finally, the group that had been using community water for less than 5 years (20.4%). (6.2%) Most of the respondent to this inquiry have practical experience with water supply. During a 5-year period, the majority of community water customers have had contact with the community water supply. These 627 individuals accounted for 93.9 percent of the sample's total population. When the age of the sample was analyzed, it was determined that around 83.8 percent of the respondents were over the age of 30, with an average response rate of 42.9% for males and 57.1 percent for women. Therefore, the data used in this study come

from a group that has lived in the area for a long time and has relied on community water since birth, with the right distribution in each group to allow for a more in-depth study of the relationship between different factors that affect the water supply.

## 5.2 The Measurement Models

According to (Hair et al., 2021; Hair et al., 2019; Hair et al., 2011) approach, we got Cronbach's Alpha scores of between 0.783 and 0.820 during the assessment of the proposed research model, which is above the acceptable threshold of 0.7. A composite reliability (CR) was calculated using the model's internal consistency testing results, and a score of 0.874–0.893 was obtained, which is acceptable since it is above the 0.70 threshold. The extracted average variance (AVE) should have convergent validity greater than 0.50, and the model output provided AVE values between 0.697 and 0.737. **Table 2** contains information. Additionally, **Table 3** provides information on the validity and reliability of the responses obtained from question items, including the median, mean, standard deviation, loading, and variance inflation factor (VIF). Each of the 27 questions is open-ended. Two parts include questions about the general characteristics and questions about the proposed model. A score must also have a Cronbach alpha value greater than 0.7. Cronbach's alpha of 0.970 confirmed the questionnaire's reliability and validity as follows: Standard deviations range from 0.626 to 0.854, with a mean of 3.805–4.155. The graph shows that factor loading values ranging from 0.793 to 0.885 are more than the allowed threshold of 0.70. Outside VIF scores vary from 1.523 to 2.163, with a criterion less than five, as shown in **Table 3**. As a result, the fact that all predictive variables have an association coefficient of less than 5 (Jattamart and Leelasantitham, 2019; Jattamart and Leelasantitham, 2020) explains why they are all appropriate. As a result, no variable used in this investigation to construct predictions was multicollinear.

Additionally, we assessed the model's discriminant validity by (Fornell and Larcker, 1981). Each diagonal value inside a construct must be more than the total of the column values, with a minimum of 0.70. For example, in continuation intention (CI), the square root of AVE is equal to 0.838, which is greater than the correlation with the other constructs, which varied between 0.401 and 0.601. As such, the research model meets the definition of a model. The Fornell-Larcker criteria produce the results summarized in **Table 4**. Furthermore, discriminant validity testing has gained widespread acceptance as a criterion for analyzing latent variable connections. Two of the most commonly used techniques to demonstrate discriminant validity are the Fornell-Larcker criteria and cross-load analysis. **Table 5** also shows another way to use the multitrait-multimethod matrix, which is called the "Heterotrait-Monotrait ratio (HTMT)." The term "HTMT" denotes the total of the cross-variable correlations of all indicators. As suggested by (Henseler et al., 2015), the HTMT should be less than 0.85; all conditions are satisfied based on the readings in **Tables 2–5**, confirming discriminant validity.

**TABLE 2** | Construct reliability and validity.

Constructs	Item Code	Cronbach's Alpha (>0.70)	Composite reliability (CR) (>0.70)	AVE (>0.50)
Continuance Intention	CI	0.787	0.876	0.701
Governance	GO	0.820	0.893	0.737
Perceived Usefulness	PU	0.797	0.879	0.708
Commitment	CO	0.804	0.884	0.718
Satisfaction	SA	0.820	0.893	0.737
Social media networks	SO	0.791	0.877	0.705
Stakeholders	ST	0.783	0.874	0.697
Transparency	TA	0.816	0.891	0.731
Trust	TR	0.815	0.890	0.729

### 5.3 Structural Model

After obtaining acceptable results from the prior evaluation, we used SmartPLS 3.3.0 to undertake hypothesis testing and goodness of fit (GoF). In this section we test the hypotheses underlying the suggested research model discussed in **Section 3.2**. We used a bootstrapping approach to 5,000 samples as suggested by Hair Jr et al. (Hair et al., 2019) resamples with a significance level of 0.05 for the path coefficient, the t-value and *p*-value. Acceptance conditions for the path coefficient ( $\beta$ ) (>0.10), t-value (>1.96), and *p*-value (<0.05) are respectively (Hair et al., 2011; Hair et al., 2019; Hair et al., 2021). As a result, the findings indicate that all remaining hypotheses have been accepted: H1a, H1b, H1c, H1d, H1f, H2a, H2b, H2c, H3a, H3b, H4a, H4b, H4c, H5a, H5b, H6a, H6b, H7a, H7b, and H8. **Table 6** summarizes the findings, and **Figure 2** depicts the model's output with an indication of hypothesis testing from the SmartPLS application. In terms of model fit, we received a goodness-of-fit (GOF) score of 0.538.

### 5.4 Model Fit

As discussed in **Section 5.2**, the findings of each construct included in the proposed model have been presented. The findings of the structural model using SmartPLS have been examined in this part, utilizing data from all constructions of the proposed model, as shown (see **Figure 2**). The results of the structural model using SmartPLS are presented in **Table 5**. In a research model, the model fit is comprised of the following three components: First, the coefficient of determination ( $R^2$ ) is unacceptable when it is less than 0.19, poor when it is between 0.19 and 0.33, moderate when it is between 0.33 and 0.67, and excellent when it is greater than 0.67 (Tenenhaus et al., 2005). All components exert moderate influence. CI, GO, PU, CO, SA, SO, ST, TA, and TR are around 0.787, 0.820, 0.797, 0.804, 0.820, 0.791, 0.783, 0.816, and 0.815. Second, standardized root refers to square residual (SRMR), and it should not be greater than 0.080 in order to be considered normalized ((Hair et al., 2021; Hair et al., 2019; Hair et al., 2011). This results in an acceptable value of 0.065 for the calculation result. Goodness of Fit (GoF) is a measure of how well a model fits its data. As shown in **Eq. 1**, it can be classified as low (less than 0.10), small (between 0.10 and 0.25), moderate (0.25–0.36), or high (more than 0.36). Depending on this output, using the same measurement method as (Phaosathianphan and Leelasantitham, 2019; Phaosathianphan and Leelasantitham, 2020; Phaosathianphan and Leelasantitham, 2021). This results in a high

level of GoF, which is 0.538. The result of GoF can be determined using **Equation 1** provided below.

$$\text{GoF} = \sqrt{R^2 \times \text{AVE}} = \sqrt{0.405 \times 0.718} = \sqrt{0.290} = 0.538 \quad (1)$$

## 6 DISCUSSION

This section will go over comparisons between a proposed research model and prior research works, as well as the implications of the findings for theories and practice.

### 6.1 Analyzed Results

The findings of the PLS algorithm suggest that the four additional variables included in the study have the following 20 hypotheses, which are listed below. Each relationship of educational attainment, including H1a, H1b, H1c, H1d, H1f, H2a, H2b, H2c, H3a, H3b, H4a, H4b, H4c, H5a, H5b, H6a, H6b, H7a, H7b, and H8, was identified for e-participation through the use of technology that creates beneficial effects, notably stakeholder participation (ST), transparency (TA), governance (GO) and social networks (SO). The first step is to begin with social media (SO), which is a readily available technology that everyone has installed on their mobile phone, such as Facebook or Instagram. As a result of this, social media is now regarded as an important factor in encouraging participation and intercommunication is critical in the current period, as communication via social media can be used in a variety of contexts rather than just between individuals, as it has been in the past. While the current social media platform allows for participation in society from a variety of perspectives, regardless of whether people or politicians are involved in the same place, they can directly communicate with one another and access the same real content almost immediately, even if someone has posted in a group. Therefore, the social media platforms sincerely want to assist in elevating transparency (TA) and good governance (GO) to a prominent position in all of the communication that individuals engage in. As long as there are stakeholders (ST) on social networks (SO) who are watching each action or inaction, it is easier to keep track of social concerns and fix them more rapidly by skipping many of the typical bureaucratic stages. As a result of the inclusion of new components in this study, such as stakeholders (ST), transparency (TA), social media (SO), and governance (GO),

**TABLE 3 |** The reliability and validity of the results.

Construct		Question Items	Mean	S.D.	Loading (>0.70)	VIF (<5.00)	Adapted from
Continuance Intention	CI1	You intend to continue utilizing e-services rather than personally visiting a government office	4.027	0.754	0.863	1.752	Bhattacharjee (2001), Bölen (2020)
	CI2	You plan to continue utilizing e-services rather than discontinue doing so	4.041	0.800	0.855	1.738	
	CI3	You want to continue utilizing e-services in the future	3.876	0.745	0.793	1.523	
Governance	GO1	You believe that the government and local government agencies should operate in the public interest	4.104	0.809	0.885	2.163	Grimmelikhuijsen et al. (2013), Mansoor (2021), Viholainen et al. (2021)
	GO2	You believe that the government or local government agencies should be more effective at their jobs	4.131	0.827	0.874	2.112	
	GO3	You believe that government entities, whether federal, state, or local, should be truthful and honest	3.994	0.795	0.814	1.566	
Perceived Usefulness	PU1	You think that e-services help you do your job faster and make it easier to find the information you need	3.805	0.828	0.795	1.643	Jeong et al. (2017), Bölen (2020), Choi (2018)
	PU2	You believe that e-services assist you in completing activities more rapidly	3.949	0.750	0.881	1.774	
	PU3	You believe that e-services are beneficial and can help you perform better at work	3.931	0.779	0.847	1.686	
Commitment	CO1	You are perpetually willing to provide a hand with community events	4.041	0.817	0.855	1.788	Zhao et al. (2011), Clark et al. (2017), Ling-Yee Li et al. (2017)
	CO2	You take pride in your community membership	4.016	0.808	0.846	1.803	
	CO3	You believe it is critical to establish and maintain positive relationships with community-based organizations	4.037	0.764	0.840	1.634	
Satisfaction	SA1	You are satisfied with your e-services experience	4.104	0.809	0.882	2.163	Bhattacharjee (2001), Hsiao et al. (2016)
	SA2	you satisfied with your capacity to utilize E-service features	4.131	0.827	0.879	2.112	
	SA3	You believe you made the correct choice in utilizing e-services	3.994	0.795	0.812	1.566	
Social media networks	SO1	You are constantly on social media	3.841	0.822	0.847	1.670	Panova et al. (2020), Gustafson et al. (2021)
	SO2	You use social media to stay connected with friends and family	4.094	0.716	0.856	1.733	
	SO3	You believe that social media makes life simpler	4.155	0.626	0.815	1.607	
Stakeholders	ST1	You believe that bringing people together to participate in activities benefits the community's image	4.019	0.723	0.866	1.834	Freeman and Reed (1983), Barrutia and Echebarria (2019), Hörisch et al. (2020)
	ST2	You think that the activities that happen in your neighborhood and in your community, help make your neighborhood a better place to live and work	3.939	0.766	0.806	1.575	
	ST3	You believe that sharing responsibility for the community and environment is critical	4.064	0.794	0.832	1.583	
Transparency	TA1	You think that the community should be aware of and understand the rules before they are put into place	4.062	0.834	0.867	1.852	Bushman et al. (2004), Cambier and Poncin (2020)
	TA2	You believe that everyone should consider public issues such as income and expenditures	4.121	0.854	0.863	1.963	
	TA3	You believe that government entities should disclose accurate data in an easily readable format	4.072	0.816	0.835	1.679	
Trust	TR1	You can bring your issues to the attention of community members	3.842	0.818	0.832	1.716	Morgan and Hunt (1994), Hashim and Tan (2015)
	TR2	You are aware that many people in your community will go above and beyond to assist others	3.951	0.814	0.860	1.802	
	TR3	You have complete confidence in the community's ability to always assist you	3.858	0.848	0.869	1.900	

trust (TR) and commitment (CO) have been strengthened, resulting in perceived usefulness (PU). The use of the system has been satisfied (SA) by all parties. As a result, today it has become much easier for anyone to participate using social media and online services. Finally, the four factors have a positive

influence on continuation intention (CI) on e-participation through the use of e-services. Thus, e-participation will continue to be stifled by e-services in the foreseeable future. This improves the community's willingness to participate, which in turn supports increased participation in all communities and groups.

**TABLE 4 |** Fornell-Larcker criterion.

Constructs	CI	GO	PU	CO	SA	SO	ST	TA	TR
Continuance Intention	0.838								
Governance	0.601	0.858							
Perceived Usefulness	0.401	0.480	0.842						
Commitment	0.535	0.636	0.466	0.847					
Satisfaction	0.601	1.000	0.480	0.636	0.858				
Social media networks	0.466	0.513	0.441	0.543	0.512	0.840			
Stakeholders	0.571	0.677	0.466	0.628	0.678	0.514	0.835		
Transparency	0.521	0.658	0.504	0.599	0.658	0.493	0.628	0.855	
Trust	0.475	0.527	0.457	0.558	0.527	0.956	0.532	0.514	0.854

**TABLE 5 |** Heterotrait-Monotrait ratio (HTMT).

Constructs	CI	GO	PU	CO	SA	SO	ST	TA	TR
Continuance Intention									
Governance	0.744								
Perceived Usefulness	0.497	0.578							
Commitment	0.671	0.783	0.566						
Satisfaction	0.744	0.764	0.578	0.783					
Social media networks	0.587	0.637	0.550	0.677	0.637				
Stakeholders	0.724	0.841	0.582	0.787	0.841	0.657			
Transparency	0.646	0.803	0.612	0.738	0.803	0.609	0.781		
Trust	0.592	0.644	0.563	0.688	0.644	0.787	0.667	0.628	

**TABLE 6 |** Structural model results.

Hypothesis; path	Path Coefficient ( $\beta$ (>0.10))	t-value (>1.96)	p-value (< 0.05)	Inner VIF (< 5)	Decision
GO -> PU	0.140	2.609	0.009	2.384	Supported
GO -> CO	0.247	5.562	0.000	2.286	Supported
GO -> TR	0.217	3.867	0.000	2.212	Supported
PU -> CI	0.146	3.975	0.000	1.300	Supported
PU -> SA	0.120	3.452	0.001	1.428	Supported
CO -> PU	0.156	2.981	0.003	2.009	Supported
CO -> SA	0.272	6.635	0.000	1.924	Supported
SA -> CI	0.531	13.957	0.000	1.300	Supported
SO -> GO	0.513	12.713	0.000	1.000	Supported
SO -> TA	0.231	5.736	0.000	1.360	Supported
ST -> PU	0.121	2.465	0.014	2.238	Supported
ST -> CO	0.236	5.301	0.000	2.168	Supported
ST -> SA	0.391	9.185	0.000	1.859	Supported
ST -> TA	0.509	14.124	0.000	1.360	Supported
ST -> TR	0.250	5.162	0.000	2.071	Supported
TA -> PU	0.243	4.334	0.000	2.078	Supported
TA -> CO	0.181	4.146	0.000	2.047	Supported
TA -> TR	0.214	4.120	0.000	1.975	Supported
TR -> CO	0.209	4.899	0.000	1.557	Supported
TR -> SA	0.113	2.713	0.007	1.650	Supported

## 6.2 Comparison Between a Proposed Conceptual Model and Prior Work

This research paper is an extended version of the ECT and is compared to those of papers that used social networking to assess service quality, it is discovered that they are consistent with those of researchers (Gupta et al., 2021) and (Alzahrani and Seth, 2021) who used social networking (SO) to examine an impression on

service recipients and motivate them to return to use the service again. Moreover, this research was conducted in a completely different environment, and it incorporated CTT and three previously untested factors: stakeholders (ST), governance (GO), and transparency (TA). Furthermore, this research was well supported by research, and it will inspire e-government to continue providing transparent and reliable services in the future

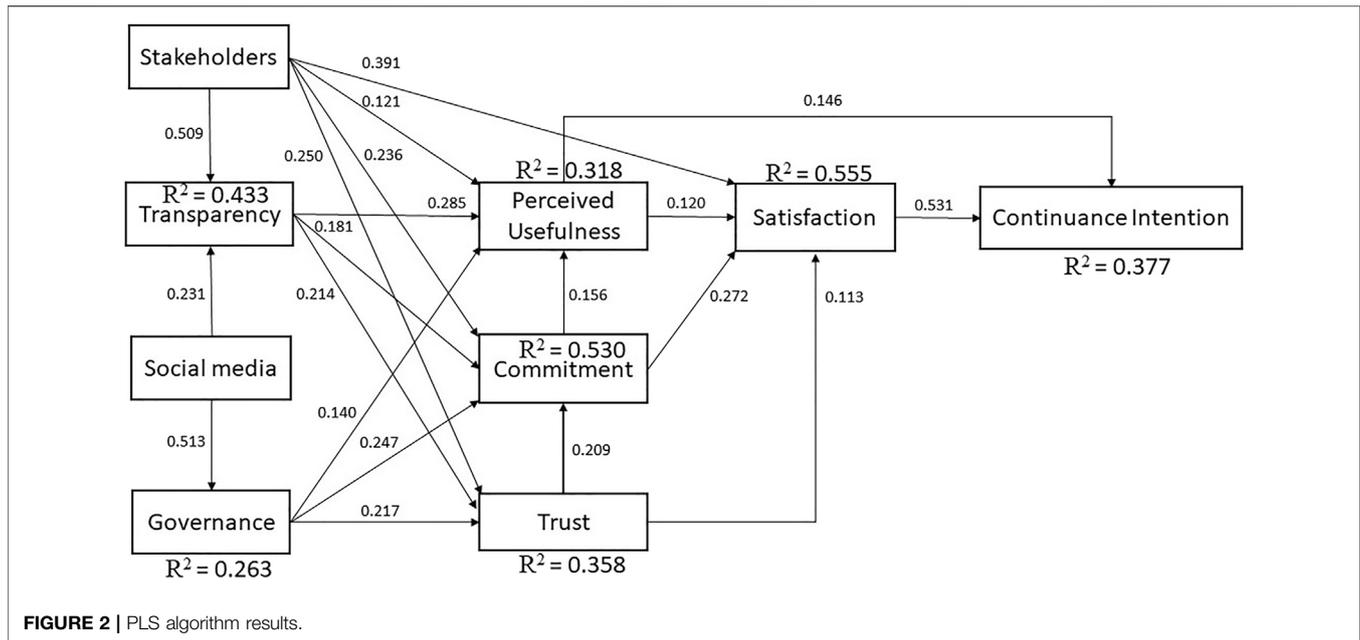


FIGURE 2 | PLS algorithm results.

as a result of the findings. When the following trials (Humbani and Wiese, 2019) and (Chen et al., 2018) trials are compared, the findings are similar in that technology increases consumer satisfaction with the service given. Specifically, this paper presents a novel perspective on how to open it up to participation by all stakeholders (ST), thereby increasing confidence and commitment (CO), which contribute to the system's increased trust (TR) as a result of (Bao and Wang, 2021) and (Mahmoud et al., 2020) arguing that support for social media is critical for increasing trust (TR) and commitment (CO) in studies related to the commitment-trust theory (CTT). Furthermore, unlike (Cheng, 2020) and (Zhao et al., 2018), who used ECT to investigate the connections between people and organizations, this paper has the potential to contribute to organizational learning due to its use of CTT (Schiffing et al., 2020). Furthermore, (Liu et al., 2021) (Awan et al., 2013), results contribute to our understanding of management should create a sustainable structure to create more opportunities for organizational development. Last of all, (Rahi and Ghani, 2019; Rahi et al., 2020), 's research examined ECTs in the banking industry and discovered that they might be effective for impressing and retaining clients when technology is available. Most of all, this is the first and most extensive study to examine an extended ECT in conjunction with CTT in public management with indigenous communities in a developing country's perception. Inviting many people to participate in e-Services via the internet is a difficult and powerful technologically enabling tool. Also, this paper looks for new ideas that will allow all stakeholders to work together for a long time, not just in small communities but in any community size.

### 6.3 Theoretical Implications

This research study expands the scope of the investigation and clarifies the relationships between the numerous input variables

relying on theories to predict the results, resulting in notable findings and new knowledge for future research projects as follows. To begin, this study aims to broaden the scope of the original expectation confirmation theory (ECT) by including new elements of trust and commitment from the Commitment Trust Theory (CTT) and four new variables obtained from the synthesis of relevant literature reviews in this study: stakeholder (ST), transparency (TA), governance (GO), and social networks (SO), all significantly correlate and promote commitment (CO) and trust (TR), followed by favorable support for perceived usefulness (PU) and a positive effect on continuation intention (CI) for e-participation through the use of e-participation through the use of e-services. This leads to the establishment of a unique conceptual model for analyzing users' participation and continuity intentions in services. Second, this research seeks to generate new knowledge and conclusions by introducing theoretically correlated variables that are likely to be promoted to integrate knowledge from three related theories: commitment trust theory (CTT), IS participation theory (ISPT), and social exchange theory (SET). By describing and proving their link using widely acknowledged advanced statistical approaches, this study contributes to a better understanding of the conceptual model to understand participation and continuity intentions in the services of users in any community. Finally, this study modified and maintained the original expectation confirmation theory (ECT) to represent the changing environment of today by integrating critical factors such as stakeholder (ST), transparency (TA), governance (GO) and social media (SO). Following a review of the applicable literature and ideas, four new factors were constructed: stakeholder (ST), transparency (TA), governance (GO), and social media (SO). This article describes the experiments that will be undertaken to validate the claims and demonstrates comprehending users' participation in e-services.

## 6.4 Practical Implications

This research study provides useful information on online participation and user engagement in a variety of e-services, including Facebook, Instagram, and WhatsApp. Although the current social media platform enables participation in society from a variety of perspectives, regardless of whether individuals or politicians are involved in the same location, they can communicate directly with one another and almost instantly access the same real content, even if it is shared in a group. Digital technology and the development of electronic public service arrangements are required for public management. As such, it is a component that the public sector must adapt to and prioritize in order to respond appropriately to the demands and behaviors of individuals and linked sectors. This benefits both the public and private sectors in the following ways: To begin with, it will serve as a guideline for the government's development of e-government or e-services in order to assist the people who act as the "hub" between citizens and government agencies. This could be a website that offers a variety of services. Individuals can select services that meet their specific needs via a variety of communication devices by accessing websites that provide e-Services in which residents and all sectors can participate and follow the status of various jobs on a daily basis. Second, to support the government's goal of developing e-services to enable citizens to access government information and services that benefit their careers, employment, and daily lives. with easy access from any location, at any time, and on any device. Also, to create a body of knowledge through public participation in the creation of electronic government and to facilitate public participation (e-Participation) by adjusting the government's position as a fully integrated digital facilitator. Third, in order to have academic research results that promote the development of convenient and fast e-services, it is necessary to engage civil society, which expects the government to improve service quality while conserving resources. For instance, The study by (Sriyanto et al., 2021) has shed more light on technology have support policy implications that align with study of (Hussain et al., 2019) about management shall adaptable and could make policy decisions based on a variety of bits of information. As a result, the use of digital technology and the growth of electronic public service arrangements are critical. As such, it is a dimension to which the public sector must quickly adapt and prioritize in order to adapt to the requirements and behaviors of individuals and linked sectors.

## 7 CONCLUSION

This study applies a PLS structural equation model to field data consisting of 627 community water users from 14 villages. Consistent This research seeks to expand the original expectation confirmation theory (ECT) by incorporating new elements of trust and commitment from the commitment trust theory (CTT) and four new variables derived from a synthesis of relevant literature reviews: stakeholders, transparency, governance, and social networks. The findings of this study suggest that social networks, communication, and trust

continue to carry out the intention of the electronic government system to have positive effects on perceived usefulness and the continuation of electronic participation through the use of electronic government. Moreover, this study presents new knowledge and conclusions by introducing theoretically correlated variables likely to promote the integration of knowledge from three related theories: commitment trust theory (CTT), IS participation theory (ISPT), and social exchange theory (SET).

This study also modified and maintained the original expectation confirmation theory (ECT) to reflect the dynamic nature of the contemporary business environment by incorporating critical factors such as stakeholders, transparency, governance, and social media. This study also describes the experiments that will be conducted to validate the hypotheses and demonstrates the effects of understanding users' participation in e-services on online participation and user engagement in a variety of e-services. Even though the current social media platform allows people to participate in society from a variety of perspectives, this study also supports the government's goal of developing e-services to provide citizens with easy access to government information and services that are beneficial to their careers, employment, and daily lives from any location, on any device, and at any time.

Besides, the purpose of this study is to develop a body of knowledge through public participation in the creation of e-government and to facilitate public participation (e-participation) by adjusting the government's position as a fully integrated digital facilitator. According to the academic view, governments must foster the growth of convenient and quickly implemented e-Services. Civil society must be involved in e-government because it expects the government to enhance service quality while conserving resources. Furthermore, both the public and private sectors have benefited from this conceptual model. As an example, it will help any organization establish e-government or e-services as a "hub" between citizens and government agencies. As a result, people have high expectations for government services, which should be more convenient and faster. Therefore, this research develops models and conceptual frameworks that encourage the development of efficient electronic services, facilitating the linkage of digital government services to public services, thus reducing any paperwork process and enhancing access to government services.

In addition, this paper presents a conceptual model that can be used as a guide to develop an e-service-driven organization that drives work while allowing people to participate and track progress. This is due to the fact that when each step can be verified, the work of the government or agencies will result in better governance. Furthermore, the conceptual model outlined in this document will help the government develop a comprehensive plan for digital government that will provide citizens with easy access to government information and services that are relevant to their jobs and daily lives, can be accessed from anywhere, and emphasizes the equality of all genders, ages, and educational levels participating in the e-service system utilized in public administration to improve

efficiency and satisfy demand. Additionally, e-government is a contemporary style of government management that makes use of computer technology and communication networks to boost the efficiency of government operations and the quality of services given to citizens.

Furthermore, e-governance aspires to deliver services online and transform government into a people-centered institution. The government has provided services to the population in an easy and comfortable way. The government administers effectively with the use of information technology. Government employees' work procedures are changing because of new technologies, and e-government may not be the sole choice in the future. However, it is something the government must do. The aspect that accelerated the spread of government services via electronic networks was that, to begin with, all stakeholders expected to be served through standardized channels consistent with the results of this article. Second, there are strategic benefits to using information in electronic service systems to aid in the effectiveness of policy implementation. The emphasis should be placed on sound policy decisions and participation from both the public and the commercial sectors.

Last but not least, designing a fully and efficiently digital public service system requires not just connecting everything through a digital system that is simply concerned with the budget but also considering the design of an e-service system in this context. access to services that allow people of all groups to have equal and comprehensive access to various government services transmitted digitally or online. By designing and modifying the government service process to be entirely in the form of an e-Service, not just downloading forms to fill out and returning them to log-in only, but also in cases where users wish to submit certificates or documents confirming qualifications from relevant agencies, a central data connector is created. Future research will focus on developing a conceptual framework for new public management. To find a model of public sector management that incorporates agile private management by applying the principle of seeking efficiency that leads to excellence from a variety of supporting factors. Using modern technology in government administration to increase the private sector in the management of public services and focusing on providing services to people while considering the quality of life, environment, and society is the most important thing.

## 7.1 Limitations and Further Directions

This study examines the major factors influencing the use of the e-service system in government administration, also known as e-government. Most of this research work during the COVID-19 pandemic is conducted remotely by volunteers representing each village. Consequently, researchers cannot independently visit the

research site to observe in order to participate in the entire research process. Future research may use three-stage follow-up surveys to establish a causal relationship between variables. Then, this study employs a simple random sampling method and focuses solely on regions where the vast majority of residents have experience with community water supply. Consequently, we may expand the scope of future studies by collecting samples from multiple areas or by sampling more urban water users, resulting in more compelling research results. In addition, for future research, the research area should be as diverse as possible, which can be accomplished by conducting additional qualitative research in other study regions and conducting in-depth interviews. In addition, the statistics and methodologies used in this study were selected based on the study's objectives and findings from pertinent literature reviews. In order to turn this research into a practical framework, it is necessary to develop a conceptual framework and test and improve it using the appropriate tools.

## DATA AVAILABILITY STATEMENT

The data analyzed in this study cannot be shared publicly because of the Personal Data Protection Act and is managed by the Institutional Review Board of Mahidol University, which authorized the questionnaire and assigned it the approval number COE No. MU-CIRB 2021/249.2709 only.

## AUTHOR CONTRIBUTIONS

NS and AL: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

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## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fenvs.2022.918981/full#supplementary-material>

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