

FACTORS OF PERCEIVED USEFULNESS OF TECHNOLOGY AFFECTING USAGE BEHAVIOR IN THE OFFICE OF THE ATTORNEY GENERAL

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ABSTRACT

This study aims to conduct a literature review on the factors of perceived usefulness of technology that influence usage behavior within the Office of the Attorney General. The review synthesizes observed variables related to the perceived usefulness of technology and its impact on usage behavior between 2020 and 2024. The findings indicate that Perceived Usefulness (PU) (Fred Davis, 1989) comprises the following aspects: (1) increased work efficiency, (2) reduced costs and travel, (3) faster access to information, and (4) transparency in service delivery. Additionally, Behavioral Intention to Use (BIU) (Davis, 1989; Fishbein & Ajzen, 1975) consists of: (1) intention to use in the future, (2) recommendation to others, (3) consistent usage, and (4) willingness to learn more. The results of this literature review provide measurement instruments for future research, facilitating further statistical analysis in subsequent studies.

Keywords: Perceived Usefulness, Usage Behavior

INTRODUCTION

Background and significance of the problem background and Significance of the Problem

The 13th National Economic and Social Development Plan (2023–2027) focuses on transforming Thailand into a "Smart Economic and Social Nation" by leveraging digital technology as a key driver of development. The plan emphasizes enhancing digital capabilities for individuals and organizations, as well as developing digital infrastructure to support the widespread adoption of technology. Integrating technology into the operations of government, businesses, and civil society is crucial for modernization, improving efficiency, reducing operational costs, and increasing global market competitiveness. The strategic goals of the Office of the Attorney General prioritize enhancing the quality and standards of justice services for the public, ensuring accessibility through diverse, equitable, and appropriate channels without discrimination. This approach aims to enhance the credibility and image of the Office of the Attorney General. The specific objectives include: 1) The percentage of success in creating new channels to facilitate access to and dissemination of legal knowledge and justice processes through digital technology. 2) The percentage of public awareness and understanding of rights, basic legal knowledge, and access to the justice system. 3) The percentage of public attitudes and satisfaction regarding access to and the receipt of justice-related services.

The adoption of technology promotes modernization and efficiency, facilitating access to and dissemination of legal knowledge. It enhances public awareness and understanding of rights and the justice process, fosters positive attitudes and satisfaction regarding access to justice services, and strengthens the credibility and image of the Office of the Attorney General.

Concepts and Theories Related to Perceived Usefulness of Technology

Perceived Usefulness refers to an individual's belief that the technology or system being used will enhance outcomes or improve work efficiency (Davis, 1989). The aspect of improving work efficiency is a key component, as it enables users to perceive the value and importance of integrating technology into their daily lives or work processes. The factors influencing perceived usefulness include:

Usage Experience A positive usage experience reinforces the perception that a system is beneficial (Bhattacharjee, 2001). The characteristics of technology, such as ease of use, operational speed, and responsiveness to user needs (Davis, 1989), significantly contribute to this perception. Organizational support, including training, guidance, and the provision of appropriate tools (Venkatesh et al., 2003), also plays a crucial role. Additionally, intrinsic motivation is an important factor, as individuals who are driven to improve their work performance view technology as a tool to enhance efficiency (Deci & Ryan, 1985).

Reducing Travel Expenses Technology helps reduce costs, such as through online meetings and e-learning systems, which lower expenses related to transportation, meals, and accommodations (Davis, 1989). **Reducing Travel Time** Remote work and the use of project management software minimize travel time, enabling individuals to work or attend meetings from home or the office (Venkatesh et al., 2003). **Enhancing Resource Efficiency** Technology facilitates the efficient management of human and financial resources, reducing unnecessary travel and optimizing resource use (Venkatesh et al., 2003). **Increasing Convenience for Remote Work** Technology enables individuals to work from home conveniently, reducing expenses and providing greater flexibility in their work (Bhattacharjee, 2001).

Fast data access refers to the belief that technology or systems enable users to quickly retrieve desired information, reducing complexity and time in the search process (Davis, 1989; Venkatesh et al., 2003). Real-time data access allows users to obtain current and updated information immediately, such as through online databases. Efficient search features minimize search time, while access to information anytime and anywhere is facilitated by mobile devices and internet connectivity, such as through cloud platforms. Rapid data management systems enhance the storage, retrieval, and utilization of information effectively. Key factors include advanced search features and cloud integration (Davis, 1989), stable internet connections (Venkatesh et al., 2003), well-organized data management systems (Bhattacharjee, 2001), **Ease of Use:** User-friendly interface and clear features (Davis, 1989).

Transparency in Services refers to the belief that systems or technology provide clear, open, and verifiable information, fostering user trust in the organization (Davis, 1989; Venkatesh et al., 2003). Key elements include the open display of information, such as service ~~status~~ ~~costs~~, and conditions, as well as the ability to review historical records through data logging systems. Fair service delivery, supported by automated systems, reduces bias. Accessibility to service-related information, such as policies, procedures, and methods, ensures ease of understanding. Transparency builds trust and enhances user confidence. Supporting factors include ease of use, as user-friendly systems increase confidence (Davis, 1989), proactive information disclosure, where organizations provide complete data (Venkatesh et al., 2003), organizational ~~support~~ ~~through~~ unbiased reports and systems (Bhattacharjee, 2001), and the reliability of technology, as stable systems reinforce trust (Venkatesh et al., 2003).

Review of Literature on Technology Acceptance Rahmawati et al. (2019) found that both perceived usefulness and perceived ease of use significantly influence users' acceptance of the E-Report system, indicating the importance of these factors in promoting technology adoption. Similarly, Ronyastra & Muhammad (2019) reported that perceived usefulness was the most influential factor in the acceptance of the SIUP/TDP online service in Surabaya, providing valuable insights for developing government online services. Li & Bi (2019) emphasized the critical role of trust at multiple levels in shaping public attitudes and intentions to use e-government. Their findings highlighted that the perceived benefits of e-government prompted the government to strategize ways to enhance public acceptance of electronic services. Stelter et al. (2020) investigated technology acceptance within public administration and its effective application in governance. Haryanto et al. (2020) identified perceived usefulness as a key factor influencing technology acceptance in public administration, particularly emphasizing managerial support and employee training to ensure readiness for adopting electronic signatures. This approach enhances system security and contributes to the development of electronic workflows. Winarno & Putra (2020) found that perceived usefulness significantly impacted the acceptance of the GFRIS system, with user experience positively influencing system acceptance, thereby enabling more effective

system utilization. Al Kurdi et al. (2020) highlighted the statistical significance of perceived usefulness in explaining the acceptance of GFRIS. Their research suggested that perceived benefits of the system could assist government agencies in improving systems and promoting widespread adoption to enhance financial reporting efficiency and transparency. Hawash et al. (2021) demonstrated that perceived usefulness (PU) and other identified factors significantly impacted employees' intentions to use ERMS, emphasizing the importance of these elements in fostering technology acceptance. Zain & Christian (2023) revealed that ease of use significantly influenced customer satisfaction and the intention to reuse the BRIMO application. Their study confirmed TAM as an effective framework for predicting technology acceptance and application reuse, particularly in terms of perceived usefulness and ease of use, which positively affected customer satisfaction. Bouarar et al. (2023) found that perceived usefulness, ease of use, attitudes toward digital volunteering, self-efficacy, and concerns over COVID-19 risks significantly influenced physicians' intentions to engage in digital health volunteering. Prasetyo et al. (2023) identified significant influences of factors such as data quality, complexity, perceived usefulness, attitudes, and intentions to use the SAHAJA ONLINE application. Their findings supported improvements in managing population documentation and reducing congestion in offices. Simanjuntak et al. (2024) explored TAM and the Information Systems Success Model (ISSM). Their study found that perceived usefulness (PU) and perceived ease of use (PEOU), influenced by data quality (IQ) and system quality (SQ), significantly impacted users' intentions to use E-Office applications. The variables explained 77.7% of users' intentions, highlighting the positive effects of IQ and SQ on PU and PEOU. Ahmed et al. (2024) examined perceived usefulness (PU) and behavioral intention to use (BIU) through TAM. They found that PU of the e-court system significantly shaped positive attitudes toward use (ATU) and BIU. Although PEOU influenced acceptance, its role was less significant compared to PU, underscoring the importance of demonstrating practical benefits of the e-court system. Rafique et al. (2024) studied the Extended TAM framework, incorporating perceived usefulness (PU) with additional factors. Their analysis of the e-LP system showed that self-efficacy and training significantly influenced attitudes and intentions to use the system. Self-efficacy directly impacted the ease of use and perceived benefits of e-LP, offering deeper insights into system adoption.

In summary, the theory of **Perceived Usefulness** posits that using technology or systems enhances work efficiency or delivers improved outcomes. This concept forms a core component of various theories and frameworks applied across diverse contexts, developed by researchers such as Davis (1989), Venkatesh et al. (2003), Rogers (1962), DeLone & McLean (1992), and Venkatesh & Davis (2000). The key elements of

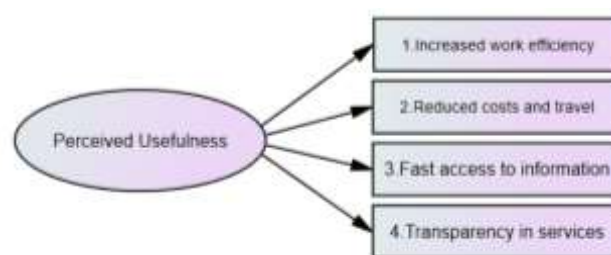


Figure 1. Perceived Usefulness

Concepts and theories on Behavioral Intention to Use

Behavioral intention to use refers to an individual's willingness to adopt new technologies, services, or systems, often measured through their actions or thoughts expressing readiness or acceptance of related innovations or systems (Davis, 1989). It represents a person's pre-determined decision to utilize a specific technology or system, influenced by factors such as perceived usefulness, perceived ease of use, and positive attitudes (Fishbein & Ajzen, 1975). Behavioral intention to use consists of: Intention to use in the future refers to the level of commitment or decision expressed by an individual to adopt a technology or system in the future. This intention serves as a key predictor of whether users will

continue utilizing the technology in the long term and acts as an indicator of successful technology acceptance (Davis, 1989; Venkatesh et al., 2003).

Behavioral intention to use consists

1. Intention to Use in the Future refers to the level of commitment or decision expressed by an individual to adopt a technology or system in the future. This intention is a critical variable used to predict whether users will continue utilizing the technology in the long term and serves as an indicator of successful technology acceptance (Davis, 1989; Venkatesh et al., 2003). Factors influencing future usage intention include current usage experiences, such as ease of use and perceived benefits, which foster continued intention to adopt the technology in the future. Bhattacharjee (2001) emphasized perceived future usefulness, referring to the belief that using technology will help achieve future goals. Davis (1989) highlighted the importance of organizational or social support, which involves encouragement from organizations, supervisors, or colleagues. Venkatesh et al. (2003) also stressed this aspect. Lastly, self-confidence in using technology in the future is a significant factor, as noted by Compeau & Higgins (1995), influencing an individual's intention to adopt and continue using the technology.

2. Recommendation to Others refers to an individual's intention or willingness to recommend technology to others for use (Fishbein & Ajzen, 1975; Venkatesh et al., 2003). This includes social sharing, where individuals suggest technology to friends, family, or colleagues and encourage them to try it. It also involves the willingness to share experiences, where individuals are ready to share their own usage experiences to build confidence in others. Another aspect is belief in the value of technology, where individuals trust that the technology is beneficial enough for others to gain similar advantages. Additionally, supporting others' usage entails helping or assisting others in getting started with the technology. Factors influencing recommendations include satisfaction with usage, as positive experiences and satisfaction with technology often lead individuals to recommend it to others. Oliver (1997) emphasized that the perceived value of technology, or the belief that technology is beneficial, solves problems, or enhances work efficiency, motivates individuals to recommend it to others. Sweeney & Swait (2008) highlighted the role of social influence, where the need for acceptance within a social group or expectations from others fosters the intention to share. Venkatesh et al. (2003) pointed out that positive and user-friendly experiences increase confidence in recommending technology to others. Davis (1989) noted that confidence in others' abilities to successfully use the technology also drives the intention to recommend. Similarly, Compeau & Higgins (1995) underscored the importance of these factors in shaping individuals' willingness to encourage others to adopt technology.

3. Consistency in Usage refers to the continuous use of technology, systems, or tools over time without abandonment or discontinuation. Individuals who consistently use a technology often exhibit behaviors that reflect commitment, familiarity, and confidence in the technology or system. This indicates acceptance and integration of the technology into daily routines or work processes (Bhattacharjee, 2001; Venkatesh et al., 2003). Key factors contributing to consistency in usage include usage experience, where positive experiences and perceived benefits from technology foster regular use (Bhattacharjee, 2001). Perceived necessity, or the belief that the technology is essential for work or daily life, also enhances consistent usage (Davis, 1989). Satisfaction and alignment with expectations help build loyalty and ensure continued use (Bhattacharjee, 2001). Additionally, organizational support, such as training or resource provision, increases the likelihood of sustained usage (Venkatesh et al., 2003). Finally, technology attributes, such as ease of use, stability, and responsiveness to user needs, significantly contribute to consistent usage (Davis, 1989; Venkatesh et al., 2003).

4. Intention to Learn More refers to an individual's commitment or desire to enhance their knowledge, skills, and abilities related to the technology, system, or tool they are currently using. The goal is to improve efficiency or adapt to new features of the technology (Compeau & Higgins, 1995; Venkatesh et al., 2003). Key components include positive usage experience, where favorable experiences encourage users to seek further learning (Bhattacharjee, 2001). The perceived complexity of technology may also drive users to learn more to deepen their understanding (Rogers, 1995). Personal motivation, such as the desire to develop skills to meet personal interests or goals, plays a critical role

(Deci & Ryan, 1985). Additionally, organizational support, such as training programs or resources for learning, enhances the likelihood of continued learning (Venkatesh et al., 2003). Finally, self-confidence, or the belief in one's own abilities, increases the intention to learn more as individuals strive to further develop their capabilities (Compeau & Higgins, 1995).

Review of Literature on Technology Acceptance Al Kurdi et al. (2020) found that the acceptance of technology systems helps government agencies improve their systems, enhancing financial reporting efficiency and transparency. Hawash et al. (2021) identified employees' intention to adopt ERMS within the oil and gas sector. Al-Rahmi et al. (2022) reported a positive and significant relationship between perceived usefulness and users' intention to use the system.

Hayuningsih & Sutanta (2022) observed that perceived usefulness significantly influences attitudes toward using geoportals, leading to the actual sharing of spatial data among local government agencies. Maita & Majid (2022) highlighted that users are more likely to accept e-learning systems when they perceive the system as useful and easy to use, thereby fostering acceptance among students and faculty members. Fernández & Garrido (2023) found a significant relationship between perceived usefulness, behavioral intention, and teachers' digital skills. Zain & Christian (2023) indicated that employees are likely to reuse an application, although satisfaction may not act as an intervening variable in certain dimensions, suggesting that ease of use alone is insufficient to enhance user satisfaction. Ahmed et al. (2024) discovered that the perceived usefulness of the e-court system significantly influences positive attitudes toward its use and behavioral intention, demonstrating the system's practical benefits in motivating agencies to adopt and implement it. Rafique et al. (2024) concluded that performance is a critical factor in promoting system acceptance and usage.

Behavioral Intention to Use represents a critical indicator for predicting actual usage across various contexts, such as organizational, educational, or personal applications. BIU serves as a mediating variable in forecasting technology adoption. Behavioral Intention to Use it consists of: 1) Intention to Use in the Future 2) Recommendation to Others 3) Consistency in Usage 4) Intention to Learn More. The variable structure can be represented as shown in Figure 2.

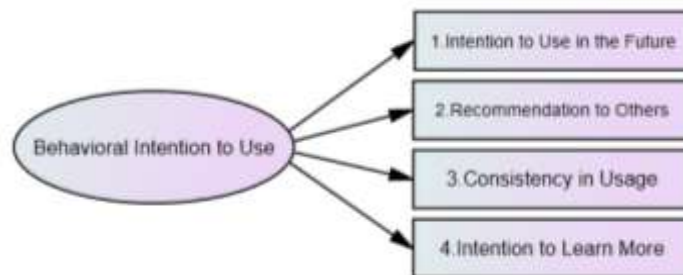


Figure 2. Behavioral Intention to Use

4. Relationship between Perceived Usefulness and Behavioral Intention to Use

Amali et al. (2022) found that technology provides benefits and fosters positive attitudes toward its use, which significantly influences Behavioral Intention to Use (BITU). Eddy et al. (2024) revealed that perceived usefulness directly impacts the intention to use. Simanjuntak et al. (2024) demonstrated that perceived usefulness explains 74% of the variance in user satisfaction, with 77.7% of users showing intentions to continue using the application. Users acknowledged that the E-Office application enhances work efficiency. Addy et al. (2024) discovered that perceived benefits influence the development of positive attitudes toward technology usage. Furthermore, support from supervisors and social influence play a significant role in promoting technology acceptance. Renatus & Mushi (2024) highlighted that trust positively affects engagement, indicating that building trust in government systems increases citizens' sense of involvement. Bouarar et al. (2023) found that physicians' intention to participate in digital health volunteering during health crises is influenced by positive attitudes toward digital volunteering and the perceived benefits of such activities. Enhancing self-efficacy further strengthens confidence in participation. Prasetyo et al. (2023) reported that perceived usefulness and intention to use significantly impact the acceptance of the SAHAJA ONLINE application among users, with perceived usefulness directly influencing their intention to adopt the application. Simanjuntak et al.

(2024) reaffirmed the significant role of users' intention to use the E-Office application, showing that 77.7% of their intentions are driven by the application's ability to improve the efficiency of mail tracking and delivery. Users expressed high satisfaction with the system's data quality, leading to continued usage intentions.

Conclude Perceived Usefulness (Davis, 1989) include: 1) Increased work efficiency 2) Reduced costs and travel 3) Fast access to information 4) Transparency in services. Behavioral Intention to Use it consists of 1) Intention to Use in the Future 2) Recommendation to Others 3) Consistency in Usage) 4) Intention to Learn More. Show the relationship as shown in Figure 3.

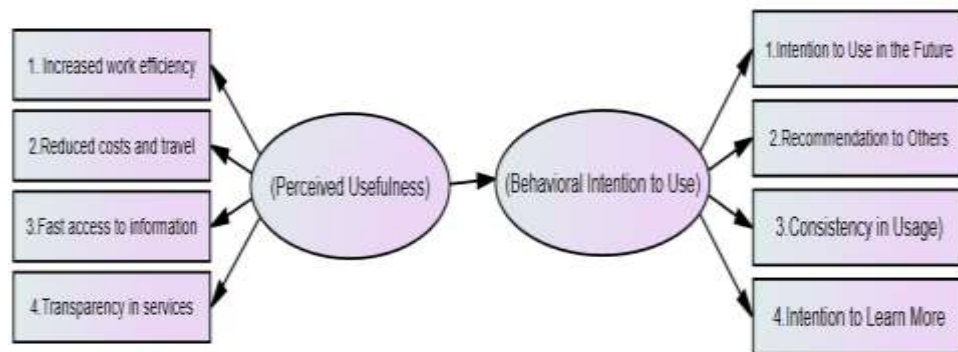


Figure 3. Relationship between perceived usefulness and behavioral intention to use.

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