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## Digital Transformation of Retirement Savings Services: Enhancing Efficiency and Sharia Economic Benefits at Taspen Cirebon

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### ABSTRACT

*Digital transformation has become a vital strategy for modernizing public services in Indonesia. This study examines the digitization of Old Age Savings services through the Taspen Online Service (TOS) at PT Taspen (Persero) Cirebon Branch and evaluates its impact on service efficiency, public welfare, and digital trust within the framework of Sharia economics. Employing a descriptive qualitative approach, data were gathered via observation, in-depth interviews, and service documentation. Findings reveal that TOS implementation reduced service processing time from an average of 3–5 days to just 1 working day, enhanced employee productivity, and broadened service accessibility. Additionally, the digitization process improved public welfare by facilitating easier access and promoting transparency. The study underscores the importance of digital security and trust in safeguarding participant data and building public confidence in online services. These results affirm the applicability of the Technology Acceptance Model, Digital Transformation principles, and Good Governance theory in advancing digital public service delivery within the Sharia economic context.*

### Article History

Received : 15 November 2025

Accepted : 23 April 2026

Published : May 2026

### Keywords

*Digital transformation, good governance, public service efficiency, Taspen Online Service*

### Publisher :

Program Studi Ekonomi Syariah

Fakultas Ekonomi dan Bisnis Islam, UIN K.H Abdurrahman Wahid Pekalongan

Jl. Pahlawan No. 52, Rowolaku, Kab. Pekalongan, Indonesia

## **INTRODUCTION**

The development of digital technology has brought major changes to public service and financial systems in Indonesia. Digital transformation is no longer an option, but a necessity for institutions that want to improve service quality, transparency, and efficiency. It has been widely recognized as a driver of efficiency, transparency, and service innovation, particularly through the integration of digital platforms that streamline administrative processes and enhance user accessibility (Mergel et al., 2019). One concrete example of the application of this technology is the Taspen Online Service (TOS) system developed by PT Taspen (Persero) to accelerate and simplify Old Age Savings (THT) services for civil servants. Through this online system, participants can access services independently without having to visit a branch office, making services more effective and efficient (Zein et al., 2025).

Digitalization in financial institutions is of high urgency because it makes a real contribution to accelerating service processes, reducing operational costs, and strengthening public trust. According to Siregar et al. (2025), the implementation of digitization in financial institutions, both conventional and sharia, can create significant efficiency while improving the quality of services based on ethical values. However, digitization also requires the readiness of human resources, technological infrastructure, and data protection so that the benefits can be optimally felt by all stakeholders. This phenomenon is reinforced by research Sarjito, (2025) which explains that digital transformation in the public sector in Indonesia still faces various challenges, particularly in terms of the digital literacy of officials, infrastructure gaps between regions, and weak data security system readiness.

The concept of efficiency is one of the important theoretical aspects in understanding this phenomenon. Etymologically, efficiency comes from the Latin word *efficientia*, which means the ability to produce maximum results with minimal use of resources. In economics, efficiency is understood as the ratio between output and input, which describes an organization's ability to maximize results from available resources (Berger & Humphrey, 1997). Empirical studies have shown that digitalization significantly improves organizational efficiency by reducing transaction costs, minimizing manual processes, and accelerating service delivery timelines (Verhoef et al., 2021). Samuelson & Nordhaus, (2009) define economic efficiency as a condition in which no individual can be made better off without making someone else worse off. In the context of Islamic economics, efficiency has a broader meaning because it is not only related to productivity, but also to blessings and justice. Chapra, (1992) emphasizes that efficiency in the Islamic view must be directed towards achieving the material and spiritual welfare of humanity (*falah*). Qudah et al. (2023) adds that the application of digital technology in Islamic financial institutions can increase efficiency and transparency, as long as the principles of *maqāṣid al-sharia*, such as justice, protection of rights, and public interest, are upheld.

In addition to efficiency, the theory of *maslahah* is also an important basis in this study. Etymologically, *maslahah* means goodness or benefit obtained to prevent harm, and is rooted in the concept of *maqāṣid al-sharia*, which includes protection of religion, life, reason, lineage, and property (Maksum, 2022). According to Al-Ghazali, every economic action must be directed towards achieving human welfare and preventing harm (*mafsadah*), which is divided into three levels: *dharuriyyah* (essential), *hajiyyah* (secondary), and *tahsiniyyah* (complementary). Contemporary scholars such as Yusuf al-Qaradawi and Muhammad Taqi Usmani have expanded this concept to address modern challenges, including the application of the principle of public interest in the digital sharia financial system (Ratna R, 2024). The integration of classical and modern views shows that the digitization of public services can be an instrument of public interest if it is directed at creating convenience, efficiency, and justice for the community in accordance with sharia values (Anriani, 2023).

From the perspective of modern institutional theory, the digitization of financial

services can be explained through the New Public Management (NPM) approach, which emphasizes efficiency, effectiveness, and results orientation in modern bureaucracy (Bhayangkara G et al., 2025). Through the application of NPM principles, digitization in public institutions such as PT Taspen (Persero) can accelerate administrative processes, reduce bureaucratic burdens, and increase service transparency. In addition, the Technology Acceptance Model (TAM) explains that the success of digital system adoption is greatly influenced by the perceived ease of use and perceived usefulness by users (Rahmani, 2023). In the context of Taspen Online Service, these two factors are the main determinants in shaping participants' trust and loyalty to digital services.

The concept of digitalization is closely linked to the theory of financial inclusion, which emphasizes the urgency of expanding access to formal financial services for all segments of society in an inclusive manner. Suci Marlina & Fatwa, (2021) in their journal *Islamic Banking and Finance* argue that the application of Sharia-based financial technology makes a significant contribution to promoting financial inclusion through the provision of adaptive and easily accessible digital services, including for communities in peripheral areas. In line with this perspective, Rofik & Huda, (2025) assert that the synergy between digitalization and Sharia financial values leads to improved operational efficiency, strengthened public trust, and the expansion of a socially just social security system. Therefore, digitalization is not merely interpreted as technological innovation but also as a strategic instrument in the reform of public service governance oriented toward efficiency and the public good in accordance with the principles of Islamic economics.

One relevant theoretical framework for explaining this transformation is New Public Management (NPM). NPM theory emphasizes the importance of efficiency, effectiveness, and results orientation in modern bureaucracy. The application of NPM principles in digitalization enables bureaucracy to become leaner, service processes to be faster, and accountability to increase. In the context of financial services, the application of technology accelerates data verification, reduces transaction costs, and strengthens public trust in service providers (Chairunisa, 2022). In addition, the Technology Acceptance Model (TAM) is an important theoretical basis for understanding public acceptance of digital technology. According to TAM, technology adoption is influenced by two main factors: perceived usefulness and perceived ease of use. In the context of financial services, the level of public acceptance of digital systems is highly dependent on the ease of access and the tangible benefits felt by users (Rahmani, 2023).

Several previous studies have examined digital transformation in the context of public services and the Islamic economy, but most have not highlighted the integration of the two in depth. The study by Hanif Ibrahim & Moh Mukhsin, (2024) highlights the application of Islamic economic principles in government administration, but does not discuss pension funds. Meanwhile, (Nurfalah & Rusydiana, 2019) discusses the digitization of Islamic finance in the context of financial inclusion, without linking it to aspects of operational efficiency and social welfare in social security institutions such as Taspen. Therefore, this study is novel in analyzing the digitization of Old Age Savings (THT) services from two theoretical dimensions, namely efficiency and welfare in the perspective of Islamic economics.

Despite the growing body of literature on digital transformation in public services and Islamic finance, there remains a significant research gap in examining how digitalization operates within state-owned social security institutions through an integrated Islamic economic perspective. Existing studies tend to focus either on technical efficiency in public administration or on sharia compliance within Islamic banking and fintech sectors, with limited attention to pension and social protection services. This study addresses this gap by offering a dual analytical framework that integrates operational efficiency with the concept of *maslahah* within the context of digital public service delivery. Furthermore, this research provides empirical

evidence from a regional branch of PT Taspen, thereby contributing context-specific insights into how digital transformation is implemented at the grassroots level in Indonesia. Therefore, the novelty of this study lies in (1) extending the application of Islamic economic analysis beyond financial institutions to social security services, (2) integrating efficiency and *maslahah* as a unified evaluative framework, and (3) providing field-based empirical evidence from a non-banking public institution undergoing digital transformation.

This study aims to analyze the implementation of the digitization of Old Age Savings services through the Taspen Online Service application at PT Taspen (Persero) Cirebon Branch, with an emphasis on operational efficiency and benefits from a sharia economics perspective. PT Taspen (Persero) Cirebon Branch was selected as the research site due to its strategic role as a pension and social security service center for civil servants in the Cirebon region, which encompasses a large and diverse participant base spanning multiple districts and municipalities. As a branch office operating in a region with varying levels of digital literacy and infrastructure, Cirebon presents a representative and contextually rich setting for examining how digital transformation policies are implemented at the grassroots level, particularly in terms of accessibility, service equity, and alignment with sharia economic principles such as justice (*'adl*), trust (*amanah*), and public welfare (*maslahah*).

Understanding the dynamics of digitization at this branch is therefore critical, as the findings can reflect broader challenges and opportunities faced by similar regional offices across Indonesia. The results of this study are expected to contribute academically to the development of Islamic economic literature in the field of digital public services, as well as serve as a practical reference for financial and social security institutions in integrating these values within the process of sustainable digital transformation.

## METHOD

This study employs a descriptive qualitative approach to analyze the implementation of the digitization of Old Age Savings services at PT Taspen (Persero) Cirebon Branch. This approach was selected because it enables the researcher to describe phenomena in depth, capture the perceptions of relevant parties, and explore the impact of digitization on operational efficiency and its compliance with sharia economic principles, particularly the values of *'adl* (justice), *amanah* (trust), and *maslahah* (public welfare). This methodological choice is consistent with prior research that applied descriptive qualitative methods in the context of digital service transformation in Islamic financial institutions (Nasir Tajul Aripin et al., 2022).

The research was conducted at PT Taspen (Persero) Cirebon Branch Office during the researcher's internship period from January to February, 2025. Data collection was carried out through three main instruments. First, semi-structured interviews were conducted with purposively selected informants, consisting of branch management and frontline employees directly involved in the operation of the Taspen Online Service application, in order to obtain firsthand accounts of implementation challenges, workflow changes, and perceived service improvements. Second, direct observation was performed during the internship period by systematically observing the digitization process as it occurred in daily service operations, including how staff interacted with the system and how participants accessed services through the application. Third, documentary analysis was conducted by reviewing internal operational reports, service procedure guidelines, and institutional data related to the Old Age Savings program to triangulate and substantiate findings from interviews and observation. Data analysis followed the interactive model proposed by Miles and Huberman, comprising three concurrent stages: data reduction, data display, and conclusion drawing, to ensure that the analysis was systematic and grounded in empirical evidence collected from the field.

## RESULTS AND DISCUSSION

### Implementation of Digital Systems at Taspen Cirebon

Prior to the implementation of the Taspen Online Service (TOS) application, the process of submitting Old Age Savings (THT) claims at PT Taspen (Persero) Cirebon Branch was conducted entirely through manual procedures. Participants were required to visit the branch office in person, bring complete physical document files, and wait for the verification process, which could take between three and five working days. This condition frequently resulted in long queues, administrative backlogs, and considerable burden on both participants and service officers. Direct observation conducted during the internship period confirmed this transition, as officers described the pre-digital workflow as one that consumed significant staff time on repetitive administrative tasks such as manual document sorting and data re-entry.

Following the rollout of TOS, participants can now submit claim documents online by uploading the required files through the official platform, after which verification is conducted digitally and integrated with the central Taspen database. One branch officer stated during an interview:

*"Since TOS was implemented, participants no longer need to come here just to submit files. They can do everything from home or register through a partner, and we can verify on our side without waiting for physical documents to arrive. The process that used to take three to five days can now be done in about one working day."*

Another employee from the administrative unit added:

*"Before, we had to manually check each file one by one. Now the system does most of the initial checking automatically. We only step in when there is an inconsistency or something that needs further verification."*



*Officer conducting digital verification at the Cirebon Branch service counter. Taken during observation, January 2025*

The empirical findings above confirm that the implementation of TOS at Taspen Cirebon represents a substantive shift in the public service delivery model, moving from a bureaucratic,

paper-based system to an integrated digital workflow. This transformation aligns with the broader trajectory of Indonesia's public service digitalization policy, which prioritizes efficiency, responsiveness, and service quality improvement.

Importantly, while existing literature has extensively discussed digital transformation in the context of conventional public institutions, as highlighted by Harahap & Daulay (2024) and Islamic banking services, as examined by Nasir Tajul Aripin et al. (2022), there remains a notable gap in studies that examine digital service implementation within state-owned social security institutions through an Islamic economic lens. Most prior studies either focus on technical efficiency metrics in isolation or apply Islamic economic principles to banking and finance without extending the analysis to pension and social protection services. This study addresses that gap by situating the operational transformation at Taspen Cirebon within a *maslahah*-based analytical framework, thereby demonstrating how the values of public benefit, institutional trust, and service equity are operationalized through digital innovation in a non-banking public institution. The findings from Cirebon Branch, as a regional office serving a diverse participant base with varying levels of digital readiness, further add contextual depth that national-level studies have largely overlooked.

### **Impact on Efficiency and Productivity**

Interviews with employees at PT Taspen (Persero) Cirebon Branch consistently highlighted measurable improvements in service efficiency following the implementation of TOS. The most frequently cited improvement was the reduction in claim processing time, from an average of three to five working days under the manual system to approximately one working day under the digital system. One senior verification officer described the change as follows:

*"The biggest difference is the time. Participants used to complain about waiting too long. Now, as long as their documents are complete and correct when they upload, we can finish the verification on the same day or the next morning at the latest."*

Beyond processing time, employees also reported a significant reduction in the administrative workload associated with manual document handling. Tasks such as physical file sorting, manual data entry, and paper-based record keeping have been largely automated through the TOS system. A staff member from the participant services unit noted:

*"Our daily workload feels much lighter now in terms of paperwork. We used to spend hours just entering data manually. Now we can focus on cases that actually need our attention, like when a participant's data doesn't match or when there's a complaint to follow up on."*

Observation of the branch's daily operations further confirmed these accounts. During peak service hours, the front-desk queue was noticeably shorter than what officers described as typical under the previous manual system, and officers were observed handling multiple digital verifications simultaneously through the TOS dashboard rather than processing physical files sequentially.



*TOS dashboard interface displayed on an officer's workstation during the document verification process.  
Taken during observation, February 2025*

The efficiency gains documented at Taspen Cirebon are consistent with the efficiency theory proposed by Berger & Humphrey (1997), which defines organizational efficiency as the capacity to produce maximum output with minimum resource expenditure. The reduction in processing time and administrative workload directly reflects this principle in a public service context.

However, what distinguishes this study's contribution from conventional efficiency analyses is its integration of Islamic economic perspectives on productivity and benefit. As Chapra (1992) argues, efficiency within an Islamic economic framework is not reducible to speed or cost minimization alone; it must also encompass the generation of *barakah* and broader societal benefit. The findings from Taspen Cirebon suggest that the efficiency achieved through TOS satisfies both dimensions: it reduces operational costs and processing time while simultaneously increasing transparency, data accuracy, and participant satisfaction, all of which align with the moral economy principles inherent in Islamic economic thought.

Furthermore, the study by Qudah et al (2023) advances existing literature by demonstrating that the digitization-efficiency nexus, previously explored primarily in Islamic banking contexts, is equally applicable and analytically productive in the domain of public social security services. The automated recording and real-time monitoring capabilities of TOS enhance institutional accountability and auditability, which are operationally aligned with the Islamic principles of *amanah* and transparency. Critically, however, this study also introduces an important qualification: efficiency can only be considered sharia-compliant when it is accompanied by the protection of participant rights and data integrity. Technocratic efficiency that prioritizes speed at the expense of fairness or data security would fall short of the standard of *falah*-oriented efficiency that Islamic economics demands.

### **Digitalization in the Perspective of Public Interest**

Observations and interviews conducted at Taspen Cirebon Branch provided concrete evidence of how the TOS application has expanded service accessibility and reduced barriers for participants, particularly those residing in areas distant from the branch office. Several officers noted that the digital system had significantly decreased the number of participants who needed to travel to the office solely for document submission purposes. One customer relations officer remarked:

*"We have participants from Kuningan, Majalengka, even some from Indramayu who used to have to come all the way here just to hand in their files. Now they can do it from home. We only ask them to come in person if there is something that genuinely needs to be confirmed face to face."*

A participant who was present at the branch during one observation session and had recently completed a TOS submission shared the following:

*"At first I was confused about how to upload the documents because I'm not that familiar with technology. But the officer helped me and explained step by step. After that, it was much easier. I didn't have to take a day off work just to come here."*

These accounts were corroborated by observational data showing that a portion of participants visiting the branch during the study period were either seeking assistance with the digital submission process or following up on claims already submitted online, rather than initiating entirely manual submissions. This suggests a gradual but ongoing transition toward digital service uptake across the participant base.



*Branch officer providing direct digital assistance to a participant navigating the TOS submission process.  
Taken during observation, January 2025*

The field findings presented above provide empirical grounding for an analysis of TOS digitalization through the lens of *maslahah*, offering a contribution that goes beyond purely conceptual applications of Islamic economic theory to digital transformation. While prior literature has acknowledged the theoretical compatibility of digital innovation with *maqasid al-syariah* (Anriani, 2023; Ratna R, 2024), few studies have tested this compatibility against actual field data drawn from public social security institutions.

The testimony of participants and officers at Taspen Cirebon demonstrates that the implementation of TOS concretely fulfills the criteria of *maslahah hajiyyah* as articulated by al-Ghazali, specifically by alleviating hardship and removing unnecessary barriers in the fulfillment of participants' legitimate rights. The reduction of geographical and administrative obstacles to service access directly embodies the principle of *taysir* (ease), while the system's automated recording mechanisms reinforce *hifzh al-mal* (protection of property) by minimizing the risk of administrative errors and document loss.

## Strengthening Digital Security and Trust

Digital security and trust are fundamental components in the successful implementation of digital transformation in public services. Trust is a critical determinant in the adoption of digital public services, particularly when users are required to share sensitive personal data, making perceived security and system reliability essential factors in sustaining digital engagement (Alzahrani et al., 2017). In the context of the Taspen Online Service (TOS) application at PT Taspen (Persero) Cirebon Branch, participants are required to upload sensitive personal and financial documents online, including identification cards, pension certificates, and bank account information. To safeguard this data, the TOS system employs several security mechanisms, including end-to-end data encryption, multi-layered authentication protocols, and role-based access controls that restrict data visibility to authorized personnel only. Based on interviews conducted during the fieldwork period, branch management confirmed that no major data breach incidents had been recorded since the application was introduced at the Cirebon Branch, which has contributed positively to staff and participant confidence in the system.

field observations and interviews further revealed that employees play an active role in building participant trust by directly communicating these security features. One staff member explained:

*"Many participants are initially worried about uploading their personal data online, especially older participants. We usually explain that the system is secure, access is limited, and their data is protected. After that, they feel more confident."*

Empirical evidence gathered through interviews with frontline employees revealed that the majority of participants who had successfully used the TOS application expressed a satisfactory level of trust in the security of the system, particularly after completing their first transaction without encountering errors or data mishandling. However, a segment of older participants, particularly those with limited digital literacy, initially demonstrated reluctance to submit personal data online due to concerns about privacy and potential misuse. This pattern aligns with the Technology Acceptance Model (TAM), in which perceived trust functions as a key determinant of user acceptance of technology. To address this, Taspen Cirebon Branch staff reported implementing face-to-face digital assistance sessions in which officers guided participants through the submission process while explaining the security features embedded in the application, thereby gradually reducing participant hesitancy and increasing adoption rates.

The strengthening of digital security is also an integral component of good governance as emphasized in New Public Management (NPM) theory. Transparency, accountability, and institutional integrity can only be meaningfully realized when the underlying digital infrastructure is capable of guaranteeing data protection and system reliability. At Taspen Cirebon, operational observations indicated that internal security protocols were regularly reviewed by the branch's IT coordination unit, and staff were periodically reminded of data confidentiality obligations through internal circulars. These institutional practices reflect an understanding that digital security is not merely a technical function but a form of institutional responsibility toward service participants, which in turn strengthens institutional credibility and reduces the risk of diminished public trust that could impede broader digital adoption (Halawa et al., n.d.).

From the perspective of Digital Transformation theory, technological change is only sustainable when it is accompanied by shifts in organizational work culture and user behavior. The findings from Cirebon Branch suggest that this transition is gradually taking place, as both staff and participants have begun to internalize digital procedures as part of their routine service interactions. Nevertheless, maintaining this momentum requires continuous investment in security infrastructure and participant communication. Islamic financial digitalization has been shown to enhance financial inclusion and socio-economic welfare when aligned with maqasid al-shariah principles, particularly in promoting equitable access and transparency (Sarea & Hanefah, 2013). In this context, the empirical evidence from this study further

supports the argument that verified digital security serves as a strategic enabler for expanding service reach. Participants who were initially reluctant to engage with the platform due to data security concerns demonstrated increased willingness to adopt the system once they received direct assurance and practical demonstration of its protective mechanisms. Thus, strengthening digital trust not only supports the operational effectiveness of public services but also broadens the socio-economic impact of digital transformation, particularly among underserved and digitally inexperienced participant groups (Rahmani, 2023).

## CONCLUSION

This study demonstrates that the implementation of the Taspen Online Service (TOS) at PT Taspen (Persero) Cirebon Branch has produced measurable and multi-dimensional improvements in public service delivery. Empirically, the digitization of Old Age Savings (THT) claim services reduced average processing time from three to five working days to approximately one working day, significantly decreased the administrative burden on staff through automated document verification, and expanded service accessibility for participants residing in remote areas across the Cirebon region, including those from Kuningan, Majalengka, and Indramayu. Interview data and direct observation further confirmed that TOS implementation enhanced employee productivity by reallocating human resources from routine data entry toward higher-order verification tasks, while the absence of recorded data breach incidents since the system's introduction has progressively strengthened both staff and participant confidence in the platform. Analyzed through the lens of Islamic economics, the findings establish that TOS fulfills the criteria of *maslahah hajiyyah* by alleviating service hardship, embodies *hifzh al-mal* through automated and auditable record-keeping, and operationalizes the principles of *al-'adl* and *taysir* by ensuring equitable and accessible service delivery across geographically diverse participant groups. The study thus confirms that digital transformation in public social security services, when designed and governed responsibly, is not only technically efficient but also substantively aligned with the values of *falah*-oriented efficiency as demanded by Islamic economic principles.

This study makes two interconnected contributions to the existing literature. First, it addresses a gap identified in prior scholarship: while digital transformation has been extensively studied in Islamic banking and conventional public administration, its application within state-owned social security institutions has received insufficient attention, particularly from an Islamic economic perspective. By developing and applying a *maslahah*-based analytical framework to the operational context of a pension service institution, this study extends the digitization-efficiency discourse beyond Islamic finance into the domain of public social protection, offering a replicable evaluative model for similar institutions across Indonesia. Second, the study grounds theoretical claims in empirical field data including direct informant quotes, observational evidence, and institutional records which distinguishes it from predominantly conceptual prior works and strengthens the evidentiary basis for integrating Islamic economic values into digital governance frameworks. Nevertheless, this study acknowledges several limitations. The research was conducted at a single branch office over a relatively short fieldwork period of less than four weeks, which constrains the generalizability of the findings to other regional branches operating under different infrastructural and demographic conditions. Furthermore, the study did not employ quantitative measures of participant satisfaction or digital adoption rates, which would have strengthened the empirical claims regarding efficiency and trust. Future research is therefore encouraged to adopt a mixed-methods approach involving multiple Taspen branches, a broader and more diverse participant sample, and measurable indicators of service quality and sharia compliance, in order to produce findings with greater external validity and policy applicability.

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