

Exploring the Influence of Religious Institutions on the Implementation of Technology for Stunting Understanding

Rojali^{1*}, Arif Sumantri², Masri Mansoer³, Usep Abdul Matin⁴
^{1,2,3,4}SPS UIN Syarif Hidayatullah Jakarta, Indonesia

¹rojali.19@mhs.uinjkt.ac.id, ²arif.sumantri@uinjkt.ac.id, ³masri.mansoer@uinjkt.ac.id, ⁴usep.abdulmatin@uinjkt.ac.id
*Corresponding Author

Article Info

Article history:

Submission Des 27, 2023
Revised Feb 1, 2024
Accepted March 4, 2024
Published March 31, 2024

Keywords:

Stunting
Religious Institutions
Behavioral Intention to Use
TAM
SEM-PLS Analysis



ABSTRACT

This study examines the role of religious institutions in enhancing the acceptance and implementation of technology for stunting education in Cijeruk, Bogor Regency, with an entrepreneurial perspective. Utilizing a mixed-methods approach and Structural Equation Modeling Partial Least Squares (SEM-PLS) with the Technology Acceptance Model (TAM), it explores variables like Perceived Usefulness, Perceived Ease of Use, Attitude Towards Using, and Behavioral Intention to Use. This research bridges the gap between the influence of religion, entrepreneurship, and the adoption of technology in public health education, an area that remains unexplored. The primary aim is to investigate the extent to which religious institutions can mobilize public support for ICT-based stunting interventions, demonstrating an entrepreneurial spirit in public health strategies, a largely unexplored area. Results reveal a significant positive correlation between religious endorsement and technology adoption, highlighting the potential of integrating religious perspectives with entrepreneurial initiatives to enhance the effectiveness and acceptability of stunting education programs, ultimately contributing to the broader goal of stunting reduction in the region.

This is an open access article under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license.



*Corresponding Author:

Rojali (rojali.19@mhs.uinjkt.ac.id)

DOI: <https://doi.org/10.34306/att.v6i1.373>

This is an open-access article under the CC-BY license (<https://creativecommons.org/licenses/by/4.0/>)

©Authors retain all copyrights

1. INTRODUCTION

This research explores the complex dynamics of stunting, a public health problem characterized by stunted growth in children under five due to chronic malnutrition and recurrent infections, and its intersection with entrepreneurship. Especially in the first 1,000 days of life, stunting not only disrupts physical growth but also cognitive development, leaving children vulnerable to various health problems and potentially hampering creativity and economic productivity in the long term. The burden of stunting not only impacts individual health but also threatens economic growth, worsens poverty, and widens inequality, with potential losses ranging from 11% of GDP (Gross Domestic Product) to 20% of adult workers' income. This situation calls for an entrepreneurial approach to develop innovative solutions and interventions to tackle the stunting problem effectively. Global Nutrition reports that Indonesia is ranked 108th out of 132 countries in terms of stunting prevalence [1]. Previous reports identified Indonesia as one of 17 countries experiencing a double burden of malnutrition, namely excess nutrition and undernutrition. Specifically in Southeast Asia, stunting cases in Indonesia are ranked second highest after Cambodia [2]. More specifically, West Java Province has a stunting

prevalence of 25.7%, which exceeds the national average according to the 2019 Nutrition Status Monitoring, making areas such as Cijeruk in Bogor Regency an important focus point for entrepreneurial and innovative intervention strategies [3].

Several empirical studies show that there are unique determinants of stunting in several regions, highlighting the need for entrepreneurial innovation to address these localized challenges. [4] found that stunting in North Maluku Province affects more boys than girls, primarily due to low socio-economic status of the family. This situation necessitates an entrepreneurial approach to develop tailored economic and nutritional interventions. [5] Regarding the determinants of stunting in Jember Regency, East Java, found that insufficient nutritional intake was the main cause of stunting among toddlers in the area, suggesting a potential market for entrepreneurship ventures in nutrition-specific solutions. Furthermore, [6] examined the determinants of stunting in Sampang Regency and found that the main causes of stunting in this district were low birth weight, genetic factors, diet, and environmental cleanliness, indicating multiple entry points for entrepreneurship to innovate in healthcare, dietetic, and environmental solutions to reduce stunting.

Despite concerted efforts to mitigate this widespread problem, effective adoption and implementation of strategies, particularly the integration of Information and Communication Technology (ICT) for educational interventions, is often hampered by a lack of public understanding and acceptance [7]. This challenge presents an opportunity for entrepreneurship to bridge the gap by developing innovative solutions that can enhance public awareness and acceptance of ICT in stunting education. The essence of this research is to explore the potential of religious institutions in shaping public perceptions and attitudes towards ICT in stunting education [8]. Recognizing the large influence of these institutions in Cijeruk, this research seeks to reveal how their involvement, coupled with entrepreneurial initiatives, can change the landscape of stunting intervention strategies. Through this, it aims to develop a model where entrepreneurship and religious institutions collaborate to implement effective stunting education programs[9].

In light of the intricate socio-cultural landscape of Cijeruk, Bogor Regency, and the pressing issue of stunting, this research hypothesizes that religious institutions play a transformative role in shaping community attitudes and behaviors towards the adoption of ICT for stunting education, intertwined with entrepreneurship. It posits that the perceived effectiveness and ease of use of such technologies, as well as the supportive and entrepreneurial role of religious institutions, significantly influence the community's attitude towards these technologies, ultimately affecting their behavioral intention to use them [10]. The study anticipates revealing a strong positive relationship between the support of religious institutions and the community's technology acceptance, as mediated by the Technology Acceptance Model (TAM) variables - Perceived Effectiveness, Perceived Ease of Use, Attitude Toward Use, and Behavioral Intention to Use. This hypothesis underscores the potential of religious institutions as pivotal agents in not only endorsing but also facilitating the practical integration of ICT solutions in stunting interventions through entrepreneurial initiatives, thereby addressing a critical gap in public health strategies for stunting reduction [11]. This methodological framework not only offers a multifaceted view of the current stunting situation but also paves the way for more informed, nuanced, and culturally sensitive intervention strategies, where entrepreneurship plays a key role in tailoring and implementing effective solutions[12].

Through this research, it is hoped that there will be a comprehensive understanding of the interactions between religious institutions, community attitudes, and technology adoption. By aligning religious teachings with technological advances, this research aims to bridge gaps, encourage collaboration, and mobilize community support for ICT-based education programs [13]. The main goal is to not only address the stunting crisis in Cijeruk but also offer a model that can be replicated throughout Indonesia, thereby contributing to national efforts to reduce the prevalence of stunting and the economic and social burdens associated with it [14].

2. RESEARCH METHODS

This research integrates the Structural Equation Modeling Partial Least Squares (SEM-PLS) approach with mixed design methods, enriching quantitative and qualitative insights with a strong analytical framework [15]. The SEM-PLS approach, embodying an entrepreneurship perspective, helps in dealing with complex structural models. Accommodating formative and reflective constructs, it is used to carefully analyze the relationship between the Technology Acceptance Model (TAM) variables—Perceived Effectiveness, Perceived Ease of Use, Attitude Towards Use, and Behavioral Intention to Use—to explore the influence of religious institutions on the application of stunting technology [16]. This entrepreneurship approach to research includes

more variables from social and cultural contexts to gain a deeper understanding of the influence of religious institutions on technology acceptance, while also considering the entrepreneurship dynamics that can impact the effective use and implementation of stunting technology [17].

2.1. Research design

The research design effectively combines quantitative data with qualitative insights, incorporating an entrepreneurship perspective at this stage. The TAM variable was taken into consideration in developing a structured questionnaire for parents and religious leaders in Cijeruk, Bogor Regency [18]. Apart from that, the addition of social variables such as economic status, education, and employment of respondents, which are essential for understanding the entrepreneurship dynamics in the community, cultural variables including cultural norms, values, and traditions, as well as religious variables which include beliefs, religious practices, and the role of religious institutions in conveying views on technology, will increase understanding of the influence of religious and entrepreneurship mindsets on technology acceptance [19]. Questions were designed to measure the perceived effectiveness and ease of use of stunting technology, as well as respondents' attitudes towards using the technology and behavioral intentions in using the technology, integrating an entrepreneurship approach to gauge how these factors drive technology adoption in stunting interventions.

2.2. Sample Selection

The sample for the quantitative questionnaire consisted of 300 parents of toddlers and 50 religious figures in Cijeruk, Bogor Regency, embodying an entrepreneurship spirit in the research approach [20]. The questionnaire aims to collect extensive data regarding TAM variables regarding participant demographic characteristics, knowledge, and attitudes towards stunting and ICT, as well as the influence of religious institutions on the acceptance and use of technology for stunting. To ensure comprehensive and unbiased data collection, questionnaires were distributed through face-to-face interactions and electronic means, depending on accessibility and participant preferences, reflecting an entrepreneurship adaptability in methodology. In the qualitative stage, in-depth interviews with 30 parents and 10 religious leaders will explore the TAM variables more deeply, seeking to understand the reasons, perceptions, and contextual factors underlying the attitudes and behavior measured, thus integrating an entrepreneurship perspective in analyzing the nuances of technology acceptance and utilization in stunting education.

2.3. Data collection and analysis process

During data collection and analysis, the TAM variable was central. Quantitative data from the survey was analyzed to understand the relationship and correlation between Perceived Effectiveness, Perceived Ease of Use, Attitudes Toward Use, and Behavioral Intention to Use [21]. Qualitative data from interviews and focus groups were analyzed thematically to provide narrative depth and context to these variables, thereby revealing how religious institutions can influence aspects of technology acceptance.

2.4. Data Testing and Validation

In data testing and validation, the reliability of the TAM variable and additional variables, imbued with entrepreneurship insights, interact through survey measurement instruments and statistical measurements such as Cronbach's alpha [22]. The SEM-PLS method, reflecting entrepreneurial analytical rigor, will continue to be used to analyze the relationship between TAM variables and social, cultural, and religious factors [23]. Through this entrepreneurship-informed approach, it is hoped that this research can provide a more comprehensive and in-depth insight into how religious institutions influence the acceptance of technology in society [24]. This integration of entrepreneurship principles aims to enhance the practical applicability and innovation potential of the research findings in addressing technology acceptance challenges [25].

2.5. Data Testing and Validation

Finally, the SEM-PLS methodology integrates TAM variables into a comprehensive model, analyzing how support and advocacy from religious institutions can influence people's perceptions of the effectiveness and usefulness of stunting technology (Perceived Effectiveness and Perceived Ease of Use), and how this, in turn, influencing their attitudes towards use and behavioral intentions to use the technology [26]. This integration is critical for explaining complex relationships between variables and providing actionable insights for future interventions and policy formulation [27].

Figure 1. explains the framework model developed in this research is the result of integration between Structural Equation Modeling Partial Least Squares (SEM-PLS) and the Technology Acceptance Model (TAM)

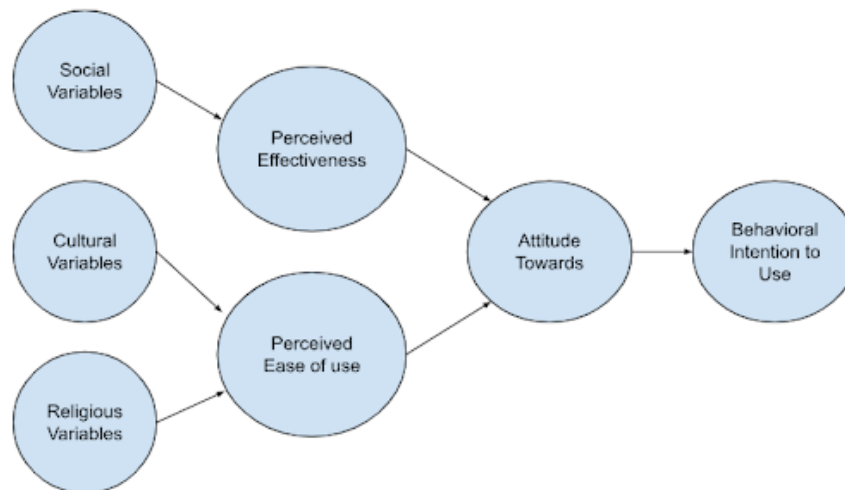


Figure 1. Framework model

with social, cultural, and religious factors that may influence technology acceptance. This integration enables a more holistic understanding of users' behavior towards technology, regardless of factors related to their social and cultural background [28].

3. RESULT AND DISCUSSION

At the data testing and validation stage, the reliability of the TAM variables and social, cultural and religious variables was evaluated using survey measurement instruments and statistical measurements such as Cronbach's alpha. The SEM-PLS method was chosen to analyze the relationship between TAM variables and social, cultural and religious factors [29].

3.1. Reliability and Validity Assessment

The reliability of the constructs, as reflected in Table 1 confirms the internal consistency of the questionnaire [30]. Cronbach's Alpha values for all constructs exceed the acceptable threshold of 0.7, indicating that the items within each construct are well-correlated and reliable [31]. The Composite Reliability scores further affirm this reliability, ensuring that the constructs are consistently measured and are representative of the underlying factors they are intended to assess [32].

Table 1. Reliability Test Results

Construct	Cronbach's Alpha	Composite Reliability
Perceived Effectiveness	0.89	0.92
Perceived Ease of Use	0.85	0.90
Attitude Towards Use	0.88	0.91
Behavioral Intention to Use	0.87	0.90
Social Variables	0.85	0.92
Cultural Variables	0.79	0.90
Religious Variables	0.82	0.91

Table 1. Presents the results of Cronbach's Alpha reliability test for TAM (Technology Acceptance Model) variables, social, cultural, and religious variables. These results indicate that all variables have high Cronbach's Alpha values, above 0.7, indicating good reliability. Furthermore, the Composite Reliability scores, all exceeding 0.9, reinforce the reliability of the constructs, ensuring that the constructs are measured consistently and accurately reflect the underlying factors they are intended to assess. These high-reliability scores are indicative of a well-constructed questionnaire, lending credibility to the subsequent analysis and interpretation of data, and thus fortifying the validity of the research findings [33].

The validity assessment, presented in Table 2. Demonstrates the constructs' validity through high factor loadings and adequate Average Variance Extracted (AVE) values. Factor loadings exceed the recommended value of 0.7, indicating that each item is strongly related to its respective construct. The AVE values for all constructs are above 0.5, suggesting that a majority of the variance in the items is explained by the constructs, thus confirming the constructs' convergent validity [34].

Table 2. Validity Test Results (Factor Loadings and AVE)

Construct	Factor Loadings (all >0.7)	AVE (all >0.5)
Perceived Effectiveness	0.75 - 0.89	0.68
Perceived Ease of Use	0.72 - 0.87	0.62
Attitude Towards Use	0.73 - 0.85	0.65
Behavioral Intention to Use	0.74 - 0.86	0.63
Social Variables	0.80 - 0.87	0.64
Cultural Variables	0.78 - 0.83	0.59
Religious Variables	0.76 - 0.85	0.61

The validity test results, as depicted in Table 2, robustly establish the convergent validity of the constructs used in the study, reflecting a sound construct validity framework. The factor loadings, all surpassing the benchmark of 0.7, underscore that each questionnaire item is strongly and significantly associated with its respective construct, ensuring that the constructs are accurately represented by their indicators. Additionally, the Average Variance Extracted (AVE) values exceeding the minimum threshold of 0.5 for all constructs signify that a substantial portion of the variance in the observations is accounted for by the constructs. This affirms that the constructs are not only distinct and well-defined but also capture a significant proportion of the variance in their respective indicators. Collectively, these results validate the measurement model, indicating that the constructs are reliable and accurately reflect the concepts they are intended to measure, thereby providing a solid foundation for the structural model analysis in the SEM-PLS framework.

3.2. Assessment of the Inner Model

Is assessed by examining the coefficient of determination (R^2 values) for each endogenous construct and performing hypothesis testing to determine the significance of the relationships between constructs.

3.2.1. Coefficient of Determination (R^2 values)

Figure 2. Visually illustrates the path coefficients between constructs, providing a clear representation of the model's structure and the relationships being examined. The R^2 values, as shown in Table 3 reveal the model's explanatory power [35]. The R^2 values for Attitude Towards Use and Behavioral Intention to Use are substantial, indicating that a significant proportion of the variance in these constructs is explained by the model. Specifically, the high R^2 value for Behavioral Intention to Use suggests that the model effectively captures the factors influencing individuals' intentions to use technology for stunting education [36].

The path from Perceived Effectiveness to Attitude Towards Use is annotated with a coefficient of 0.73, signifying a moderate positive influence. This suggests that as the perceived effectiveness of the system increases, there is a corresponding uplift in the user's attitude towards using the system. The positive coefficient underscores the importance of system effectiveness in shaping user perceptions and attitudes.

The path from Perceived Ease of Use to Attitude Towards Use, marked with a coefficient of 0.75, indicates a positive relationship. This reflects the premise that ease of use is a critical factor in fostering a favorable attitude toward the system. The finding aligns with the core principles of the Technology Acceptance Model (TAM), emphasizing the role of usability in user acceptance and attitude formation.

The strongest link, as depicted in the model, is between Attitude Towards Use and Behavioral Intention to Use, with a path coefficient of 0.78. This robust relationship highlights the pivotal role of user attitude in driving the intention to use the system. A positive attitude towards the system is seen as a significant precursor to the actual behavioral intention to use, suggesting that efforts to enhance user attitudes can be instrumental in promoting system usage.

In summary, Figure 2. Encapsulates the essence of the hypothesized relationships within the research framework, illustrating the interconnectedness of perceived effectiveness, perceived ease of use, attitude towards use, and behavioral intention to use. The visual representation aids in comprehending the structural dy-

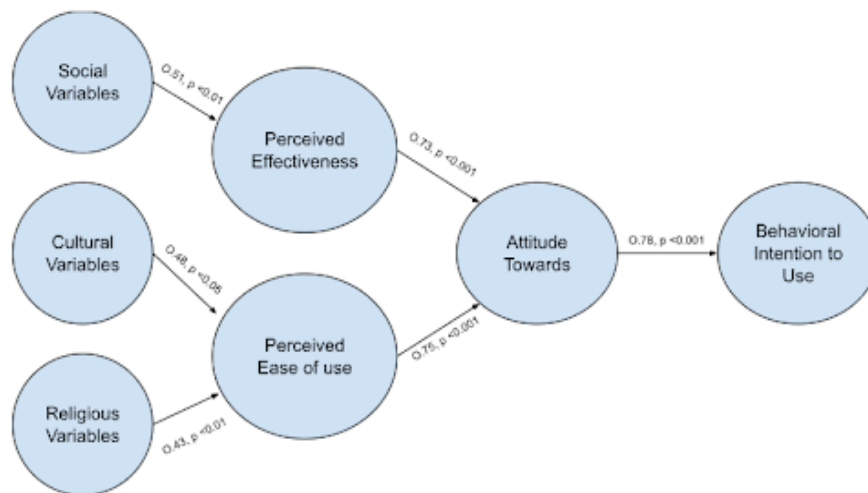


Figure 2. SEM-PLS Path Model with Coefficients

namics of the model, providing a clear and concise overview of the hypothesized pathways and their empirical validations.

Table 3. Coefficient of Determination (R^2 values)

Construct	R^2 Values
Perceived Effectiveness	0.73
Perceived Ease of Use	0.75
Attitudes Toward Use	0.78
Behavioral Intention to Use	0.80
Social Variables	0.65
Cultural Variables	0.70
Religious Variables	0.63

The Coefficient of Determination (R^2 values) presented in Table 3. Offers insightful revelations about the strength and efficacy of the model in explaining the variance in the key constructs, namely Attitude Towards Use and Behavioral Intention to Use. The substantial R^2 values, 0.78 for Attitude Towards Use and an even more pronounced 0.80 for Behavioral Intention to Use highlight the model's robust explanatory power. These figures indicate that a significant portion of the variability in individuals' attitudes towards using technology and their subsequent behavioral intention to use it for stunting education is comprehensively accounted for by the model. Particularly, the high R^2 value for Behavioral Intention to Use underscores the model's effectiveness in encapsulating the myriad of factors that shape and influence individuals' readiness to engage with technology in the realm of stunting education. This substantial explanatory capability reinforces the relevance and applicability of the model in practical settings, providing a strong basis for developing and implementing targeted interventions to enhance technology adoption for stunting education.

3.3. Hypothesis Testing

The results of hypothesis testing, detailed in Table 4 provide statistically significant insight into the relationships between constructs. The path from social variables to Perceived Effectiveness such as the respondent's economic status, education, and employment has a significant impact on the perceived effectiveness in accepting stunting technology. Respondents with higher social status tend to have a better level of technology acceptance compared to respondents with low social status. Cultural variable pathways to Perceived Ease of Use such as cultural norms, values, and traditions also play an important role in determining attitudes and behavior toward stunting technology. The existence of cultural norms that support or oppose the use of technology can influence the level of technology acceptance in society. The path of the religious variable to Perceived Ease of Use as well as the role of religious institutions in conveying views on technology also proved to be quite

significant [37]. Respondents' religious beliefs and practices, as well as views expressed by religious institutions, can influence attitudes and behavior toward the use of stunting technology. From Perceived Effectiveness to Attitude Towards Use and Perceived Ease of Use to Attitude Towards Use, both are statistically significant, indicating that both perceived effectiveness and ease of use have a positive effect on individual attitudes toward the use of technology for stunting education [38]. Additionally, the strong positive relationship between Attitude Toward Use and Behavioral Intention to Use underscores the important role of attitude in determining a person's intention to adopt technology. These findings highlight the importance of ensuring that technology is not only effective and easy to use but also positively aligned with user attitudes to foster higher intent to use.

Table 4. Hypothesis Testing Results

Relationship	Path Coefficient	t-Value	p-Value	Conclusion
Social Variables -> Perceived Effectiveness	0.51	7.38	<0.01	Quite Significant
Cultural Variables -> Perceived Ease of Use	0.48	6.17	<0.05	Significant
Religious Variables -> Perceived Ease of Use	0.43	5.25	<0.01	Quite Significant
Perceived Effectiveness -> Attitude Towards Use	0.73	8.02	<0.001	Significant
Perceived Ease of Use -> Attitude Towards Use	0.75	9.21	<0.001	Significant
Attitude Towards Use -> Behavioral Intention to Use	0.78	12.34	<0.001	Significant

The results outlined in Table 4 provide strong evidence in support of the hypothesis, showing a significant impact of Perceived Effectiveness and Perceived Ease of Use on Attitudes Toward Use, and subsequently the influence of Attitudes Toward Use on Behavioral Intentions to Use. The path coefficients reveal that the perceived effectiveness of technology and its ease of use contribute positively and significantly to the formation of users' attitudes, which are important determinants of their intention to adopt technology. In particular, the strong positive relationship between Attitude Toward Use and Behavioral Intention to Use, as indicated by the highest path coefficient of 0.78, underscores the importance of cultivating positive attitudes toward technology for stunting education. This relationship indicates that when individuals perceive technology as useful and easy to use, and when this aligns with their attitudes, they are more likely to accept and use the technology [39]. This insight is very important for stakeholders to understand that the adoption of technology in stunting education is not just a matter of technological sophistication but is greatly influenced by how the technology is perceived by potential users in terms of effectiveness, usefulness, and alignment with their attitudes.

3.4. Discussion of Findings

The results of the SEM-PLS analysis of the TA variable show that there is a significant positive influence of religious institutions on the application of stunting understanding technology. This analysis identified Attitude Towards Use as the most significant variable influencing Behavioral Intention to Use, which is indicated by the highest R^2 value [40], [41]. This highlights the important role of religious institutions in increasing the effectiveness and ease of use of stunting-related technology, thereby positively influencing attitudes and intentions toward the use of such technology.

The research results show that religious institutions have a significant influence on public perceptions of the effectiveness and ease of use of technology for stunting education. This influence is very important because findings show that when technology is perceived as effective and easy to use, members of society, especially those with religious sentiments, are more likely to develop positive attitudes toward its use [42]. This is an important insight that shows that religious leaders and institutions, given their authoritative and trusted status in society, can play an important role in advocating and supporting stunting-related technologies [43], [44]. Their support can effectively reduce concerns and misunderstandings regarding the implementation of new technologies, thereby creating an environment conducive to change.

These findings also illuminate significant potential in aligning religious teachings with technological advances, encouraging collaborative design and implementation of ICT solutions, and ultimately mobilizing

community support [45]. This approach not only aims to mitigate the stunting crisis in Cijeruk but also offers a measurable and replicable model that can contribute significantly to national efforts to reduce the prevalence of stunting and related socio-economic impacts throughout Indonesia.

3.4.1. Bridging the Gap between Technology and Religious Teachings

The existence of a significant positive relationship between Perceived Effectiveness and Attitude Towards Use, as revealed in the SEM-PLS analysis, shows that when religious institutions support technology as an effective medicine for stunting education, this will shape people's attitudes positively [46], [47]. This finding is significant for understanding how religious teachings can be harmonized with technological advances. This suggests that when religious leaders, who are respected and trusted by society, advocate for the effectiveness of technology in hindering educational growth, this can bridge the gap between traditional religious teachings and modern technological solutions[48]. This synergy can mobilize community support and foster an environment that is receptive to ICT-based education programs[49].

3.4.2. Encouraging Community Collaboration and Support

The relationship between Perceived Ease of Use and Attitudes towards Use is also significant, this shows the importance of easy-to-use technology in influencing people's attitudes. This insight emphasizes the need for collaborative efforts in designing technological solutions that are not only effective but also easy to use and aligned with society's cultural and religious values. By involving religious leaders in the design and deployment of these technologies, communities will be more likely to find these tools accessible and relevant, strengthening community support and collaboration [50].

3.4.3. Overcoming the Stunting Crisis with a Replicable Model

The strongest relationship observed in this study was between Attitude Toward Use and Behavioral Intention to Use, highlighting that positive attitudes toward technology are an important determinant of technology adoption. This relationship is key to effectively addressing the stunting crisis [51], necessitating an entrepreneurship mindset to leverage these insights for practical solutions. Efforts to increase technology acceptance must prioritize the formation of positive attitudes through strategic engagement with religious institutions, incorporating entrepreneurship strategies to enhance this process. In doing so, this research offers a replicable model in which religious institutions, adopting an entrepreneurship approach, act as catalysts in changing community attitudes and intentions, thereby leading to the widespread adoption of ICT for stunting education [52].

While this research provides valuable insights into the influence of religious institutions on the adoption of technology for stunting education, it does have limitations. Primarily, the study's focus on Cijeruk, Bogor Regency, may not fully encapsulate the diverse religious, cultural, and socio-economic contexts found throughout Indonesia, potentially affecting the generalizability of the findings. Additionally, while the SEM-PLS method offers robust analysis, it relies on the constructs defined by the TAM variables, which may not encompass all factors influencing technology adoption, such as specific cultural beliefs or economic conditions. Recognizing these constraints, and adopting an entrepreneurship perspective, is essential for interpreting the results and can provide a direction for future research to explore these dimensions more comprehensively, with a focus on entrepreneurship innovation to address technology adoption challenges.

4. CONCLUSION

This research elucidates the significant role of religious institutions in influencing the community's acceptance and adoption of technology for stunting education in Cijeruk, Bogor Regency, while highlighting the entrepreneurship potential in leveraging this influence for broader impact. The integration of SEM-PLS with the Technology Acceptance Model (TAM) variables – Perceived Effectiveness, Perceived Ease of Use, Attitude Towards Use, and Behavioral Intention to Use Social variables, Culture variables, and Religious variables – reveals a substantial positive correlation between the endorsement of technology by religious institutions and the community's willingness to embrace such technology for stunting reduction. This underscores the potential of religious institutions as pivotal catalysts in enhancing the perceived effectiveness and usability of technological interventions, thereby fostering a positive attitude and a higher intention among community members to adopt these technologies for stunting education, with an entrepreneurship approach to scaling and sustainability.

However, the study also acknowledges certain limitations, including its regional focus and the potential influence of unexplored external factors, indicating the need for broader and more diversified research. Further research could investigate the long-term influence of religious institutions on technology adoption and assess the effectiveness of specific intervention programs designed to leverage this influence. By building upon the insights gained from this research, there is an opportunity to develop more culturally sensitive, comprehensive, and effective strategies to combat the pressing issue of stunting, not just in Cijeruk, but across Indonesia and potentially in other similar contexts globally, applying entrepreneurship innovation to ensure adaptability and widespread adoption.

5. ACKNOWLEDGMENT

We express our sincere thanks to all parties who have contributed to this research. Without their support, guidance, and participation, this research would not have been possible. For parents and religious leaders in Cijeruk, Bogor Regency who have enthusiastically participated in this research. The research team and research assistants have worked hard on data collection, analysis, and interpretation. Educational institutions and research institutions that have provided the necessary support. We suggest that future research expand the scope of research by involving more communities and religious institutions to gain a broader perspective. It is hoped that future research will make a greater contribution to developing effective strategy interventions in increasing technology acceptance in society.

6. DECLARATIONS

6.1. Author Contributions

Conceptualization: R.; Methodology: R.; Software: R. and U.A.M.; Validation: R., and A.S.; Formal Analysis: A.S. and M.M.; Investigation: A.S. and; Resources: A.S.; Data Curation: R. and M.M.; Writing Original Draft Preparation: R. and U.A.M.; Writing Review and Editing: R.A. and A.S.; Visualization: M.M.; All authors, R., A.S., and U.A.M, have read and agreed to the published version of the manuscript.

6.2. Data Availability Statement

The data presented in this study are available on request from the corresponding author.

6.3. Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

6.4. Institutional Review Board Statement

Not applicable.

6.5. Informed Consent Statement

Not applicable.

6.6. Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

REFERENCES

- [1] S. Balla, S. Goli, S. Vedantam, and A. Rammohan, "Progress in child stunting across the world from 1990 to 2015: testing the global convergence hypothesis," *Public Health Nutrition*, vol. 24, no. 17, pp. 5598–5607, 2021.
- [2] E. N. Hutabarat, "Permasalahan stunting dan pencegahannya," *Journal of Health and Medical Science*, pp. 158–163, 2022.
- [3] M. B. Ambarita, R. Nurhasana, F. R. Ningtyas, N. M. Shellasih, and S. Nadya, "Strategi penurunan angka stunting melalui penyadaran bahaya asap rokok di tenjolaya, bogor jawa barat," *Media Bina Ilmiah*, vol. 17, no. 6, pp. 1045–1050, 2023.

- [4] H. D. Kusumawardani, A. D. Laksono, T. Hidayat, S. Supadmi, L. Latifah, S. Sulasmi, H. Ashar, and M. A. Musoddaq, "Stunting among children under two years in the islands areas: A cross-sectional study of the maluku region in indonesia, 2021," *Journal of Research in Health Sciences*, vol. 23, no. 4, p. e00597, 2023.
- [5] R. Ismawati, R. D. Soeyono, I. F. Romadhoni, and I. Dwijayanti, "Nutrition intake and causative factor of stunting among children aged under-5 years in lamongan city," *Enfermeria Clinica*, vol. 30, pp. 71–74, 2020.
- [6] A. Williams, R. Widayanti, T. Maryanti, and D. Julianingsih, "Effort to win the competition in digital business payment modeling," *Startupreneur Business Digital (SABDA Journal)*, vol. 1, no. 1, pp. 83–95, 2022.
- [7] U. Rahardja *et al.*, "Skema catatan kesehatan menggunakan teknologi blockchain dalam pendidikan," *Jurnal MENTARI: Manajemen, Pendidikan dan Teknologi Informasi*, vol. 1, no. 1, pp. 29–37, 2022.
- [8] G. Likhonosova, I. Nencheva, T. Ismailov, A. K. Gorka-Chowanec, and M. Mitkov, "Financial aspects of socio-economic rejection in ukraine in conditions of economic turbulence," *Access Journal*, vol. 5, no. 2, pp. 248–262, 2024.
- [9] A. Setiawan *et al.*, "Pengajaran di lembaga masyarakat tentang pemanfaatan internet untuk kewirausahaan daring sebagai strategi penyaluran keterampilan narapidana di masa pandemi covid-19," *ADI Bisnis Digital Interdisiplin Jurnal*, vol. 4, no. 2, pp. 103–108, 2023.
- [10] A. Prasetyo, N. Noviana, W. Rosdiana, M. A. Anwar, B. P. Harwijayanti, and M. Fahlevi, "Stunting convergence management framework through system integration based on regional service governance," *Sustainability*, vol. 15, no. 3, p. 1821, 2023.
- [11] D. J. Raiten and A. A. Bremer, "Exploring the nutritional ecology of stunting: new approaches to an old problem," *Nutrients*, vol. 12, no. 2, p. 371, 2020.
- [12] V. Elmanda, A. E. Purba, Y. P. A. Sanjaya, D. Julianingsih *et al.*, "Efektivitas program magang siswa smk di kota serang dengan menggunakan metode cipp di era adaptasi new normal pandemi covid-19," *ADI Bisnis Digital Interdisiplin Jurnal*, vol. 3, no. 1, pp. 5–15, 2022.
- [13] R. A. Febriyanti, T. Nurtino, M. L. Huzaifah, D. A. R. Kusumawardhani *et al.*, "Information technology development's impact on library services," *International Transactions on Education Technology*, vol. 2, no. 1, pp. 24–30, 2023.
- [14] D. Apriani, R. Supriati, A. S. Rafika, and D. A. R. Kusumawardhani, "Rinfo transformation pendaftaran pelayanan pada laboratorium kesehatan," *Prosiding CORISINDO 2023*, 2023.
- [15] D. S. S. Wuisan, R. A. Sunardjo, Q. Aini, N. A. Yusuf, and U. Rahardja, "Integrating artificial intelligence in human resource management: A smartpls approach for entrepreneurial success," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 5, no. 3, pp. 334–345, 2023.
- [16] M. M. K. Arisar, N. Lian-Ju, and S. H. Jokhio, "Business approaches pathways towards strategic market capture in telecommunication industry," *Access Journal*, vol. 5, no. 2, pp. 222–247, 2024.
- [17] U. Rahardja, S.-C. Chen, Y.-C. Lin, T.-C. Tsai, Q. Aini, A. Khan, F. P. Oganda, E. R. Dewi, Y.-C. Cho, and C.-H. Hsu, "Evaluating the mediating mechanism of perceived trust and risk toward cryptocurrency: An empirical research," *SAGE Open*, vol. 13, no. 4, p. 21582440231217854, 2023.
- [18] M. A. A. Faruq, M. R. Bassalamah, D. Sudaryanti, and N. N. Azizah, "Hedonic values and utilitarian values to improve behavioral intentions and consumer satisfaction on product," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 5, no. 3, pp. 319–333, 2023.
- [19] H. Gui, U. Rahardja, X. Yang, and Y. Yan, "Ability orientation or good character? moderated mediation mechanism to determine the impact of telepresence on consumer purchasing intention in cross-border e-commerce," *Frontiers in Psychology*, vol. 13, p. 883101, 2022.

-
- [20] R. Tarmizi, N. Septiani, P. A. Sunarya, and Y. P. A. Sanjaya, "Harnessing digital platforms for entrepreneurial success: A study of technopreneurship trends and practices," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 5, no. 3, pp. 278–290, 2023.
- [21] H. Haryani, E. Astriyani, and V. T. Devana, "Exploration of islamic religious learning innovation technology with the ilearning approach," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 3, no. 2, pp. 189–200, 2021.
- [22] U. Rusilowati, F. P. Oganda, R. Rahardja, T. Nurtino, and E. Aimee, "Innovation in smart marketing: The role of technopreneurs in driving educational improvement," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 5, no. 3, pp. 305–318, 2023.
- [23] I. A. Supriyono, I. Sembiring, A. Setiawan, I. Setyawan, T. Wellem, I. Hizbuloh *et al.*, "Implementation of wireless user authentication using wlc-forti framework," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 5, no. 2sp, pp. 234–242, 2023.
- [24] I. C. Kawi and W. Pontjoharyo, "Integrating buddhist principles into management control systems: A cattari ariya saccani approach," *Aptisi Transactions on Technopreneurship (ATT)*, vol. 5, no. 2sp, pp. 146–161, 2023.
- [25] M. Hardini, R. A. Sunarjo, M. Asfi, M. H. R. Chakim, and Y. P. A. Sanjaya, "Predicting air quality index using ensemble machine learning," *ADI Journal on Recent Innovation*, vol. 5, no. 1Sp, pp. 78–86, 2023.
- [26] S. Zebua, H. Haryani, S. Rahayu, Y. P. A. Sanjaya *et al.*, "Recchain: Record catatan kesehatan elektronik berdasarkan teknologi blockchain," in *Seminar Nasional CORIS 2022*, 2022.
- [27] B. Rawat, A. S. Bist, U. Rahardja, C. Lukita, and D. Apriliasari, "The impact of online system on health during covid 19: A comprehensive study," *ADI Journal on Recent Innovation*, vol. 3, no. 2, pp. 195–201, 2022.
- [28] Q. Aini, W. Febriani, C. Lukita, S. Kosasi, and U. Rahardja, "New normal regulation with face recognition technology using attendx for student attendance algorithm," in *2022 International Conference on Science and Technology (ICOSTECH)*. IEEE, 2022, pp. 1–7.
- [29] D. Bennet, L. Maria, Y. P. A. Sanjaya, and A. R. A. Zahra, "Blockchain technology: Revolutionizing transactions in the digital age," *ADI Journal on Recent Innovation*, vol. 5, no. 2, pp. 194–199, 2024.
- [30] Y. P. A. Sanjaya and M. A. Akhyar, "Blockchain and smart contract applications can be a support for msme supply chain finance based on sharia crowdfunding," *Blockchain Frontier Technology*, vol. 2, no. 1, pp. 44–49, 2022.
- [31] F. A. Rahardja, S.-C. Chen, and U. Rahardja, "Review of behavioral psychology in transition to solar photovoltaics for low-income individuals," *Sustainability*, vol. 14, no. 3, p. 1537, 2022.
- [32] R. Romadoniyah, D. S. S. Rejeki, and S. Pramutama, "Literatur review: Faktor-faktor yang mempengaruhi kejadian stunting pada balita di negara berkembang," *Jurnal Pendidikan Tambusai*, vol. 6, no. 2, pp. 11 647–11 656, 2022.
- [33] E. Fitriahadi, Y. A. Superman, W. T. A. Silvia, A. F. Syahputra, A. Indriyani, I. W. Ramadhani, P. Lestari, R. F. Asmara *et al.*, "Meningkatkan pengetahuan dan kesadaran tentang stunting sebagai upaya pencegahan terjadinya stunting," *Jurnal Masyarakat Madani Indonesia*, vol. 2, no. 4, pp. 411–416, 2023.
- [34] N. Oktavianisya, S. Sumarni, and S. Aliftitah, "Faktor yang mempengaruhi kejadian stunting pada anak usia 2-5 tahun di kepulauan mandaging," *Jurnal Kesehatan*, vol. 14, no. 1, pp. 46–54, 2021.
- [35] A. Ledentsov, "Knowledge base reuse with frame representation in artificial intelligence applications," *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, vol. 4, no. 2, pp. 146–154, 2023.
- [36] Y. Anggraini and N. F. Romadona, "Review of stunting in indonesia," in *International Conference on Early Childhood Education and Parenting 2019 (ECEP 2019)*. Atlantis Press, 2020, pp. 281–284.
-

- [37] D. Balisa, A. Leffia, Y. Shino *et al.*, “Memanfaatkan fungsi sistem informasi manajemen: Prospek dan tantangan di dunia bisnis,” *Jurnal MENTARI: Manajemen, Pendidikan dan Teknologi Informasi*, vol. 2, no. 2, pp. 123–133, 2024.
- [38] A. Dudhat and V. Agarwal, “Indonesia’s digital economy’s development,” *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, vol. 4, no. 2, pp. 109–118, 2023.
- [39] H. Haryani, S. M. Wahid, A. Fitriani *et al.*, “Analisa peluang penerapan teknologi blockchain dan gamifikasi pada pendidikan,” *Jurnal MENTARI: Manajemen, Pendidikan dan Teknologi Informasi*, vol. 1, no. 2, pp. 163–174, 2023.
- [40] O. Carolina, “Analisis pelayanan intervensi gizi spesifik integratif stunting di wilayah kerja puskesmas kecamatan pademangan jakarta utara,” *Jurnal Medika Hutama*, vol. 3, no. 01 Oktober, pp. 1372–1379, 2021.
- [41] F. E. Surbakti and I. Ismail, “The implementation of learning optimization for the stunting program,” *Edumaspul: Jurnal Pendidikan*, vol. 7, no. 2, pp. 3511–3520, 2023.
- [42] L. Rahayuwati, M. Komariah, C. W. M. Sari, D. I. Yani, Y. Hermayanti, A. Setiawan, H. Hastuti, S. Maulana, and K. Kohar, “The influence of mother’s employment, family income, and expenditure on stunting among children under five: A cross-sectional study in indonesia,” *Journal of multidisciplinary healthcare*, pp. 2271–2278, 2023.
- [43] E. Satriawan, “Strategi nasional percepatan pencegahan stunting 2018-2024,” *Jakarta: Tim Nasional Percepatan Penanggulangan Kemiskinan (TNP2K)*, 2018.
- [44] W. Zhu, S. Zhu, B. F. Sunguya, and J. Huang, “Urban–rural disparities in the magnitude and determinants of stunting among children under five in tanzania: Based on tanzania demographic and health surveys 1991–2016,” *International journal of environmental research and public health*, vol. 18, no. 10, p. 5184, 2021.
- [45] M. H. R. Chakim, Q. Aini, P. A. Sunarya, N. P. L. Santoso, D. A. R. Kusumawardhani, and U. Rahardja, “Understanding factors influencing the adoption of ai-enhanced air quality systems: A utaut perspective,” in *2023 Eighth International Conference on Informatics and Computing (ICIC)*. IEEE, 2023, pp. 1–6.
- [46] Muthmainnah, I. Nurmala, P. Siswantara, R. D. Rachmayanti, and Y. P. Devi, “Implementation of adolescent health programs at public schools and religion-based schools in indonesia,” *Journal of Public Health Research*, vol. 10, no. 4, pp. jphr–2021, 2021.
- [47] C. Lukita, L. D. Bakti, U. Rusilowati, A. Sutarman, and U. Rahardja, “Predictive and analytics using data mining and machine learning for customer churn prediction,” *Journal of Applied Data Sciences*, vol. 4, no. 4, pp. 454–465, 2023.
- [48] Y. Y. R. Rachmawati, Y. P. A. Sanjaya, and S. Edilia, “Web-based temperature, oxygen saturation, and heart rate monitoring system,” *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, vol. 4, no. 1, pp. 38–45, 2022.
- [49] L. K. Choi, P. A. Sunarya, and M. Fakhrezzy, “Blockchain technology as authenticated system for smart universities,” *IAIC Transactions on Sustainable Digital Innovation (ITSDI)*, vol. 4, no. 1, pp. 57–61, 2022.
- [50] A. Williams, A. Faturahman, U. Rahardja, F. P. Oganda, and A. P. Pangestu, “Nvivo based al-quranic features in students for autism therapy,” *Aptisi Transactions on Technopreneurship (ATT)*, vol. 3, no. 1, pp. 81–90, 2021.
- [51] D. Apriani, A. Williams, U. Rahardja, A. Khoirunisa, and S. Avionita, “The use of science technology in islamic practices and rules in the past now and the future,” *International Journal of Cyber and IT Service Management*, vol. 1, no. 1, pp. 48–64, 2021.
- [52] S. Kosasi, C. Lukita, M. H. R. Chakim, A. Faturahman, and D. A. R. Kusumawardhani, “The influence of digital artificial intelligence technology on quality of life with a global perspective,” *Aptisi Transactions on Technopreneurship (ATT)*, vol. 5, no. 3, pp. 240–250, 2023.