# An Empirical Study on the Effects of Financial Management Spirituality and Technology Adoption on Church Performance

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**Abstract.** This study aims to analyze the performance of the Church by examining the impact of responsible financial management and the adoption of relevant technologies on human performance. The research adopts a quantitative approach, employing a census method with Data collected from 68 Parishes in the Archdiocese of Jakarta through questionnaires distributed to the Daily Parish Council. The collected data is analyzed using SmartPLS v.4, revealing that financial management spirituality significantly influences technology adoption. and technology adoption, in turn, significantly impacts Church performance. These findings suggest that Church leaders recognize and appreciate the benefits of technology, particularly in terms of security, but also highlight the need for further exploration of financial management spirituality. By investigating the relationship between financial management spirituality, technology adoption, and Church performance, this study contributes to the understanding of how these factors interact and influence the overall performance of the Church. The findings emphasize the importance of embracing technology while upholding spiritual principles in managing Church finances. Such insights can inform the development of strategies and practices that enhance the financial well-being and performance of the Church, ultimately benefiting the community it serves. Future research can delve deeper into the spiritual dimensions of financial management and explore additional factors that may influence the Church's performance in the context of technology adoption.

**Keywords:** Financial spirituality management, Technology adoption, Church performance, Archdiocese of Jakarta

# 1. Introduction

Over time, adequate management of resources has helped the Church develop to carry out its activities. Several scholars have analyzed the Church on various focuses like building management resources (Alphen et al., 2010; Muchira et al., 2018), an entrepreneurial orientation for Pastors (Corrêa et al., 2017; Wulandari, 2019), and development of the construction of the church that adapts to future generations (D'Amato & Sulla, 2021). According to Njeri et al., (2019) the success of the Church in achieving its strategic goals can be seen from the effectiveness in managing Church servants, whereas Peter et al., (2020) suggested empowering a workforce that is adapted to the progress of the times. However, it needed more exploration regarding the type of technology used, where the training provided by the Church can be tailored to the implementation of the technology and the needs of the workforce. Therefore, it needs to analyze the flow of how the changes have improved the services of the Catholic Church.

Deniswara et al., (2023) develop a conceptual framework as a source of knowledge for Church leaders to build adequate management of all resources, but it needs to adapt to technological growth and how the councils see the dynamic changes can give a new experience to the Church operation and services as it stated (Kristianus et al., 2022). A study of 242 houses of worship in Portugal by Oliveira et al., (2021) shows reliable resource management helps improve Church stability through services that can meet the spiritual needs of people and communities. Resource management is important to steer the workforce to full responsibilities, especially with ever-faster technological advances, so the right approach is needed to enable it to accommodate future generations (D'Amato & Sulla, 2021).

The results of the Vatican Council in 1965 explained that the purpose of the Roman Catholic Church is to spread the teachings directed by the Pope to dioceses around the world (Wulandari, 2019). Catholic Church forms the spirituality of the congregation to take the right actions to avoid the risk of deviations that are detrimental to several parties. Previous studies examined spirituality as a dimension of religion to be integrated with financial decision-making free from the risk of fraud (Fairholm &; Gronau, 2015; Mariska, 2018). Fry et al, (2010) affirm that spiritual value has the potential to improve financial performance which has an impact on organizational performance. In addition, financial users can set priorities that maintain excess spending (Humairo & Yuliana, 2020). However, all of the previous research has focused on spirituality for business with people that have different backgrounds in the financial management decision-making process, where it should be specifically aimed at exploring spirituality in depth.

Spirituality with financial decisions is widely used in the business world, however, not many studies have combined elements of financial management spirituality as a basis for improving the management of Church finances in a transparent and accountable way. Purbiyati & Setyawati, (2020) combines spirituality with financial management by conducting a case study of the Catholic Church in Surabaya and shows that the Church has managed financial conditions based on Church and government rules with structured controls, where the deviations do not occur. However, financial management spirituality has not been extensively explored by previous research, especially on individual behavior and the contribution of leaders to maintaining transparency and accountability in the financial distribution in the Catholic Church. Leaders' involvement is very important to keep asset allocation under control and done according to procedures and ensure the congregation's trust (Mckinney, 2020).

In organizing the operations of the Church, Church leaders are not spared from the risks and threats resulting from the rapidly evolving progress of the times. The growth of technology in the era of the industrial revolution 4.0 has transformed the series of businesses and organizations into fully automated (Slapničar et al., 2022), wherein 2021 the level of information technology spending in the Asia Pacific increased by 89% and accelerate decision-making process by 88% (Muscolino et al., 2020). The application of advanced technology has an impact on non-profit organizations (Rathi & Given, 2017), whereas Sorescu, (2017) and Raudeliūnienė, (2022) stated that leaders need to build an adequate

strategic framework according to the potential of the organization to revitalize the operational activities. Technological developments have also affected the performance of the Church in the conduct of services and administration.

In the COVID-19 pandemic, Catholic Schools and Churches in the United Kingdom are applying technology to ensure that aid is distributed affordably, both in fostering spirituality, providing food, and undergoing other programs based on data received in real-time (McKinney, 2020). In addition, Singarimbun, (2021) explained that the Church has transformed to be e-Church by carrying out online worship through optimal use of technology that can reach a wide audience. It brings a new experience for Pontianak Archdiocese, where based on 335 respondents showed that there are new things obtained through accessing technology that turns worship online (Kristianus et al., 2022). However, the gap between technology and human competencies becomes wider, where according to the ACCA report 2021 in Kurniawan & Mulyawan, (2023) stated more than 50% of the young generation is worried that will decrease their job in the future.

Changes to the Church's system of activities caused controversy among Church leaders, where Chow & Kurlberg (2020) study in Europe and Asia showed opposition that considered technology was not following sacred Church traditions, but the rest argued that it helped the mission of spreading Church teaching (Karnawati & Mardiharto, 2020; McKinney, 2020; Singarimbun, 2021). McIntosh, (2015) shows technology is the main cause of the decline of the Church, not because of secularism, but after being analyzed further, it was found that the hybrid method of worship is accepted by the congregation. The existence of the Church in addition to being focused on the internal is also facilitated to analyze external conditions, which can thus become agents of change that also increase the capacity of the environment and people through worship activities and programs carried out (Cooper et al., 2021; Pillay, 2017).

The development of the times has caused opposition in the Church, but the Church can't keep up with the changes without losing the value of originality. D'Amato & Sulla, (2021) with a knowledgebased approach to reconstruct the Church building as a whole due to the risks arising from the age and old shape of the building to the servants of the Church, which is also adjusted to reduce secularism among the younger generation. Therefore, Church leaders must build innovation to find new ways through joint discussions between priests and pastors to find advanced solutions, which aim to avoid the risk of vulnerability or inappropriate system implementation (Kurniawan & Mulyawan, 2023). However, Wulandari, (2019) found that some of the Parish Daily Councils have innovated to find new ways of serving the congregations, while others were opposed to innovating, which would hinder the service planning process.

Pope Francis said at Pontificia Accademia Per la Vita 25 (PAV) directing dioceses around the world to apply technologies such as Artificial Intelligence or Robots to help improve Church services, which need careful consideration to avoid asymmetric information (Sinibaldi et al., 2020). However, it needed to encourage Church leaders to support Catholic Church growth in technology-based transformation, which is the subject of this research to identify the level of technology adoption through the development of indicators that aim at daily Parish council. Kolbjørnsrud et al., (2017) showed 44% of top-middle management consider technology as a threat, which causes a lack of facilities at work, where it shown on how the debate of the leaders of the Church in Asia and Europe on the technological growth continues to be very high due to the incompatibility with the implementation of the mission of the Church (Chow & Kurlber, 2020). The controversy over the used of advance technology in the Catholic Church caused high secularism that happened significantly in Europe.

Several previous studies analyzed Church performance by adopting a balanced scorecard that focused on people's satisfaction and increasing the number of active Church ministers in serving and evaluating the diversity of Church leaders (Boggs & Fields, 2010; Perkins & Fields, 2010). Zapo & Meiden, (2021) adopted a balanced scorecard to measure financial and non-financial management that

affects the Church performance with a focus on congregational satisfaction through ethnographic studies same as (Boggs et al., 2010), which shows gaps that should comprehensively examine the performance of the Church according to changes that have embraced advanced technology as a tool to improve the quality of the organization. In addition, when analyzing the activity of Church servants, it shows the turnover of the servant, whereas according to Kristianto & Wang (2020) it shows a high turnover cause the data is not updated and couldn't be transmitted to the next servant. To avoid inhibition in the decision-making process, this study measures Church performance by using the balanced scorecard elements.

# 2. Literature Review – Hypothesis Development

Research on the Church as a religious institution has been widely carried out by analyzing the size, scope, and measurement of Church performance by adopting a balanced scorecard (Boggs & Fields, 2010; Zapo & Meiden, 2021). The Church operates following the purpose and vision to spread spiritual teachings that have an impact on the spiritual development of people through worship, spiritual formation programs, volunteers, and donations to the environment (Corrêa et al., 2017). McKinney, (2020) analyzed the COVID-19 situation that requires the Church to integrate with technology in carrying out spiritual missions, by improving the real-time decision-making process to allocate aid funds appropriately.

In Indonesia, the operation of the Church has also adapted to the presence of technology, where the transformation into an e-Church provides a new experience that facilitates offerings, conducting online worship that reaches people flexibly (Kristianus et al., 2022; Singarimbun, 2021). However, Kristianto & Wang, (2020) stated the occurrence of application silos requires new reconstruction in stages to integrate system-based Church infrastructure, where at the 2023 Synod of Archdiocese of Jakarta was also revealed that the Church must adapt to follow changes by accepting views from several parties that reduce clericalism.

As one of the oldest dioceses in Indonesia since 1807, Diocese has faced a series of changes and continues to develop to build 66 parishes (Wulandari, 2019). However, until 2022 there have been 69 parishes under the auspices of the Archdiocese of Jakarta and not many studies have performed analysis based on the latest Parish growth data. The following sections will describe some of the factors affecting Church performance that are studied as research hypotheses.

## 2.1 Financial Management Spirituality Affects Church Performance

Several studies adopt elements of spirituality as a religious dimension that influences individual behavior to be motivated to take the right actions when managing company finances (Fairholm & Gronau, 2015; Fotaki et al., 2020; McCuddy & Pirie, 2007). Similarly, other scholars (Danes et al., 2016; Fry et al., 2010; Humairo & Yuliana, 2020) assert that spiritual elements affect individuals who have priorities in managing financial conditions. In addition, Mariska et al., (2018) analyzed the condition of financial governance in rural areas influenced by the commitment and competence of the Treasurer which is strengthened by behavior and motivation to take actions following regulatory rules as an element of spirituality.

Financial management analysis has also been carried out at the Church with Financial Management Spirituality (Purbiyati & Setyawati, 2020). Purbiyati & Setyawati, (2020) proves that the Catholic Church in Surabaya already has adequate regulations and flows to support the distribution and recording of Church financial statements, thus also increasing stewardship to the people. Following Mariska et al., (2018) study regarding the existence of regulations that affect the accountability of financial managers. Financial management spirituality helps analyze the financial condition of the Church which is structured with rules, honesty, and accountability.

Hypothesis 1: Financial management spirituality positively affects Technology Adoption.

## 2.2 Technology Adoption Positively Affects Church Performance

In carrying out its activities, the Diocese cannot be separated from technological developments that transform the entire process of service, program implementation, fund acquisition, and system-based administration. This is shown in several studies (McKinney, 2020; Njeri et al., 2019; Sinibaldi et al., 2020) technological advances began to affect the existence of the Church to integrate with carrying out daily activities. To impart relevant knowledge and support performance requires training and motivation that encourages the competence and capacity of Church servants on an ongoing basis (Muchira et al., 2018; Peter et al., 2020). Muchira et al., (2018) stated training has an impact on individuals to be motivated to do more things that transcend limits so it will have an impact on Church performance amid rapid change.

However, opposition to the application of technology also arises, where Chow & Kurlberg, (2020) indicate technology that is not in harmony with sacred traditions in the Church. Supporting previous statement, Kristianto & Wang, (2020) explain how the implementation of the system in the Archdiocese of Jakarta has not been updated and hinders the distribution of information that has an impact on the Parish target. Controversy due to differences in views of Church leaders can also be seen from Wulandari's research, (2019) that some parishes in Archdiocese of Jakarta are innovating to find new methods of carrying out services, but several see innovation as incompatible with the mission of the Church as also conveyed (Pearce et al., 2010). However, although the gap and inconsistency in technology-based Church operational analysis are still large (Cooper et al., 2021; McKinney, 2020; Singarimbun, 2021), it shows the need for empowerment of Church leaders to implement the system by establishing the right partners, such as Microsoft, IBM, and other related parties (Sinibaldi et al., 2020).

Hypothesis 2: Technology adoption positively affects Church performance.

## 2.3 Financial Management Spirituality Positively Affects Church Performance

Financial management spirituality aims to analyze the financial governance of the Church that is based on spirituality to act honestly, transparently, and accountability (Purbiyati & Setyawati, 2020). Several studies adopted element of spirituality that focused on individual financial management literacy (Humairo & Yuliana, 2020), efficiency and encouragement to take the right actions based on individual beliefs (Danes et al., 2016; Fairholm & Gronau, 2015; Fotaki et al., 2020; Mariska, 2018). However, previous research found that it guides financial management in companies and other organizations such as rural areas, etc, where beliefs vary as a result of individual heterogeneity in these organizations.

However, McCuddy & Pirie's (2007) explained that spirituality comes from the internal attributes that individuals possess, which determine behavior and attitudes to act according to the rules. Menne et al., (2016) carried out a study of Islamic financial institutions that are based on Islam and found that spirituality does not directly affect, but instead strengthens individual responsibility in the management of financial institutions avoiding the risk of fraud. Purbiyati & Setyawati, (2020) scientifically found a combination of financial management spirituality that leads the Church in Surabaya by observing the flow of financial management and administration of the Church service, so this research has as objective to analyze spiritual financial management that has an impact on improving the performance of the Church with the integrity of financial leaders and administrators to allocate efficiently to meet the needs of the Church and the satisfaction of the congregations.

Hypothesis 3: Financial management spirituality positively affects Church performance.

## 2.4 Research Framework

The Catholic Church always faces change over time, where an innovation causes conflict among Church leaders. Parishes as spiritual organizations need to increase their effectiveness in carrying out worship, implementing programs, volunteer activities, and other activities that benefit people and communities according to the times (Cooper et al., 2021; Pillay, 2017). Following Pope Francis direction, the Church must be able to keep up with the times through the adoption of technology by establishing the right

partners and careful consideration to avoid the occurrence of asymmetric information (Sinibaldi et al., 2020).

The accuracy of information plays a major role in directing Church ministers to carry out their activities according to their part and for people in carrying out worship activities. However, the growth of technology in addition to providing advantages also has the potential to cause risks in the form of rapid levels of fraud due to vulnerabilities in the system (Kurniawan &; Mulyawan, 2023). Fraud that occurs in the implementation of the system has an impact on the manipulation of report data, such as the use of outdated data will hinder decision making and lack of monitoring on financial inflows has an impact on the lack of financial allocation (Slapničar et al., 2022), so individuals need to have honesty and a transparent attitude based on rules to increase accountability of Church ministers (Purbiyati &; Setyawati, 2020).

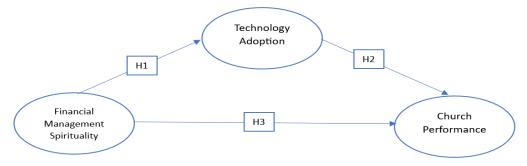


Fig.1: Research Framework Concept

# 3. Research Methodology

In line with the purpose of this study, quantitative research design was applied. Several scholars (Hair, et al., 2019; Weyant, 2022) affirm that quantitative research focuses on objective measurements and mathematical analysis that includes large amounts of data as a sample to represent a population that reveals a phenomenon that occurs. More particularly in this study, a census survey was conducted due to the small unit analysis or sampling frame of the population. Accordingly, a total of 69 parishes of Jakarta Archdiocese were included in the survey, with a response rate of 100%. The implementation of the census aims to obtain comprehensive data coverage for all parishes in the Archdiocese of Jakarta, where each respondent will represent a parish, so the data obtained is 69 data. Some of the previous research by Wulandari, (2019) obtained data from the Archdiocese of Jakarta and Corrêa et al., (2017) to the Diocese in Brazil through interviews that, although directed at the Diocese, did not cover all the churches in the area, so in this research is carried out census study to Roman Catholic of Archdiocese of Jakarta.

The data collection process was carried out by distributing a closed questionnaire consisting of several questions as indicators adjusted to research variables. Respondents gave answers according to the options given, where this study used the Likert Scale starting from (1) Strongly Disagree to (5) Strongly Agree (Joshi et al., 2015). Some studies that distribute questionnaires obtain many responses that help solve problems that occur by revealing adequate results as representative implications for existing populations (Creswell, 2007; Kurniawan &; Mulyawan, 2023; Weyant, 2022). The data collection was carried out from January to February 2023.

The questionnaire was developed by compiling operational variables based on the development of a research model consisting of several constructs that affect Church performance. Each variable has a research dimension that represents all indicators in 1 variable, which has been presented in the table below.

Table 1. Operational Research Variables

	Financial Management Spirituality				
No	Dimension	Indicators	Indicator Statement	Code	
1	Financial Strategy	Planning and Development (Purbiyati & Setyawati, 2020)	The fear of God is the cornerstone of the Daily Parish Council in making parish financial decisions.	FMS1	
2	Development (McCuddy and Pirie, 2007; Purbiyati &	Skilfull Judgement (Purbiyati &; Setyawati, 2020)	The Daily Parish Board realized that managing the parish finances well would make his life happier even if he did not receive payment.	FMS2	
3	Setyawati, 2020)	Effectivity of Money Usage (Menne et al., 2016)	The Daily Parish Council applies the value of honesty in managing Parish finances.	FMS3	
4	Financial Policy	Financial Process (Purbiyati & Setyawati, 2020)	The Daily Parish Council has clear standard operating procedures in managing Parish finances	FMS4	
5	(Fairholm and Gronau, 2015; Purbiyati &	Segregation of Duties (Purbiyati & Setyawati, 2020)	The Daily Parish Council has a clear division of duties and authority in managing the finances of the Parish.	FMS5	
6	Setyawati, 2020)	Financial Standard (Purbiyati & Setyawati, 2020)	The Daily Parish Council adopts financial accounting standards in regulating the financial management of the Parish.	FMS6	
7	F 1	Financial Spirituality (Faridawati and Silvi, 2019)	The Daily Parish Council always prioritizes transparency in managing parish finances because it believes that the money managed belongs to God.	FMS7	
8	Financial Management (Purbiyati &	Monitoring (Purbiyati &; Setyawati, 2020)	The Daily Parish Council takes financial decisions for the welfare of the people served.	FMS8	
9	Setyawati, 2020)	Evaluation, (Purbiyati &; Setyawati, 2020)	The Daily Parish Council conducts evaluations based on monitoring of financial management carried out by the Diocesan Finance Board	FMS9	

Technology Adoption				
No	Dimension	Indicators	Indicator Statement	Code
1	Relative	Technology Advantages (Rathi & Given, 2017)	Information and Communication Technology makes it easier for the Church to provide service to the people.	TA1
2	Advantages (Gangwar et al.,	Flexibility (Gangwar et al., 2015)	Information and Communication Technology helps the Church to provide information to people without limitation of time or place.	TA2
3	2015)	Time Efficiency (Gangwar et al., 2015)	Information and Communication Technology helps the Church reach people faster.	TA3
4		Easy to Use (Gangwar et al., 2015)	The Daily Parish Council has the ability to use Information and Communication Technology to manage church ministry operations.	TA4
5	Compatibility (Gangwar et al., 2015)	Training Support (Peter et al., 2020)	The Archdiocese of Jakarta supports the Daily Parish Council to conduct the latest Information and Communication Technology training.	TA5
6		Importance (Researcher Point of View)	The Daily Parish Council attaches great importance to the use of Information and Communication Technology in the operation of church services.	TA6
7	Security	Confidentiality (Gangwar et al., 2015)	Information and Communication Technology helps keep Church data confidential.	TA7
8	(Gangwar et al., 2015)	Fraud Detection (Researcher Point of View)	Information and Communication Technology helps detect potential fraud / detect errors	TA8
9	Organizational Readiness,	Technology Resources (Gangwar et al., 2015)	The parish has adequate resources to adopt Information and Communication Technology.	TA9
10	(Gangwar et al., 2015)	Investment (Researcher Point of View)	The parish allocates investment funds for the adoption of information and communication technologies.	TA10

11	Human ResourcesThe Daily Parish Council prepares Church ministers to adopt information and communication technology in carrying out services.			TA11			
	Church Performance						
No	Dimension	Indicators	Indicator Statement	Code			
1	Financial (Perkins	Church Income Growth, (Purba et al., 2021)	The Daily Parish Council conducts an Analysis of the costs that will be incurred before approving for the expenditure of activities.	CP1			
2	& Field, 2010)	Financial Support, (Perkins & Field, 2010)	The Parish receives support from the community by obtaining donations to improve the quality of Parish services.	CP2			
3	Attendance Satisfaction	Increase in Number of Church Members, (Boggs & Field, 2010)	Parish Financial Statements are audited by the Diocesan Finance Board periodically.	CP3			
4	(Perkins & Field, 2010)	Membership Church, (Perkins & Field, 2010)	The Daily Parish Council establishes closeness to the people by holding togetherness events for the people.	CP4			
5	Internal Business	Ministerial Time Spent in Planning, (Boggs & Field, 2010)	The number of parishioners who are active as parish ministers has increased.	CP5			
6	Process (Boggs & Field, 2010)	Church Staff Attending Training, (Boggs & Field, 2010)	Plenary Parish Council meetings are held regularly to evaluate service to the people.	CP6			
7	Innovation and	Sunday Mass Attendance as Percent of Members (Perkins & Field, 2010)	The Daily Parish Council innovates services to reach all parishioners.	CP7			
8	Learning, (Boggs & Field, 2010)	Facility in Church	The number of people attending the Eucharist continues to grow.	CP8			
9		Services, (Boggs & Field, 2010)	The Daily Parish Council provides regular training to all Parish Ministers to be able to serve the people optimally.	CP9			

The technique for data analysis is using Structural Equation Modeling – Partial Least Square (SEM – PLS) by adopting SmartPLS Ver 4 to help calculate the data. This study conducted several tests based on Kurniawan &; Mulyawan, (2023) using SmartPLS Ver 4.8.4 which analyzes the validity and reliability test through Convergent Validity, Average Variance Extracted (AVE), and Construct Validity to guarantee the level of validity of the data received. The convergent reliability test refers to the test of outer loading that reach >0.50, AVE value >0.50, and construct reliability as the reliability test that has to reach>0.70 (Hair et al., 2019).

## 4. Results and Discussion

By distributing questionnaires to all Parishes, Researchers obtained 68 data, where there is 1 Parish that does not have a Daily Parish Council, which does not match the research criteria. After analyzing SmartPLS v.4, we found zero missing values on data from various parishes. The following is the presentation of respondents' demographic data as follows:

Table 2. Respondent Demographic Data				
Gender				
Category	Data	Percentage		
Male	48	70.59%		
Female	20	29.41%		
Total	68	100%		
Position				

Category	Data	Percentage
Chief Pastor	7	10.29%
Pastor Associate	5	7.35%
Secretary	20	29.41%
Treasurer	18	26.47%
Church's Member (Coordinator)	18	26.47%
Total	68	100%
D	ekenat	
Category	Data	Percentage
Central Jakarta	7	10.29%
West Jakarta 1	6	8.82%
West Jakarta 2	9	13.24%
South Jakarta	8	11.76%
North Jakarta	6	8.82%
East Jakarta	10	14.71%
Bekasi	10	14.71%
Tangerang 1	6	8.82%
Tangerang 2	6	8.82%
Total	68	100%

After obtaining data distributed through questionnaires to the Archdiocese of Jakarta, the data was processed using SmartPLS Ver 4 to form modeling on the results of the data received. Following Hair et al., (2019) the first stage identifies the validity and reliability of data to ensure all data can be further interpreted as adequate information from research. All data are based on variables consisting of various indicators to determine and analyze Church performance by referring to service activities, administration, to the renewal of technology-based resources carried out for the spiritual development of the people. In the following section are the results of the data processing analysis.

#### 4.1 Validity Analysis

Data needs to be tested to ensure it does not contain biases that will impact the presentation or interpretation of research results. According to Sekaran &; Bougie, (2016) and Hair et al., (2019) validity testing is the initial stage to ensure that the data can be used further, where the table below shows the results of processing validity data by doing outer loading factors to identify all indicators that have met the test criteria.

	Table 3. C	utput Loading Fact	ors	
Variables	Indicators	Loading Factor	Description	Source
	FMS2	0.799	Valid	
	FMS3	0.842	Valid	
Financial Management	FMS4	0.723	Valid	
Spirituality	FMS6	0.896	Valid	
	FMS7	0.791	Valid	Sekaran & Bougie
	FMS9	0.800	Valid	(2016); Hair et al.
	TA1	0.713	Valid	(2019)
	TA2	0.759	Valid	
Technology Adoption	TA3	0.855	Valid	
	TA4	0.839	Valid	
	TA5	0.577	Valid	

	TA6	0.860	Valid
	TA7	0.810	Valid
	TA8	0.898	Valid
	TA9	0.694	Valid
	TA10	0.742	Valid
	TA11	0.778	Valid
	CP1	0.604	Valid
	CP3	0.887	Valid
	CP4	0.524	Valid
Church Performance	CP5	0.957	Valid
Church Performance	CP6	0.740	Valid
	CP7	0.889	Valid
	CP8	0.824	Valid
	CP9	0.675	Valid

Based on the table above, shows several indicators are not following the criteria determined by (Hair et al., 2019; Sekaran &; Bougie, 2016). In Financial Management Spirituality indicators consisting of FMS1, FMS5, and FMS8, where it can be concluded Roman Catholic of the Archdiocese of Jakarta has carried out financial management responsibilities based on Christian values as being honest and accountable. However, the occurrence of the COVID-19 pandemic caused difficulties in internal control that resulted in a lack of leadership involvement in managing Church finances allocation.

Supported by Kristianto & Wang, (2020) how the high turnover rate of Church servants has the potential to hinder the decision-making process of the Church. Purbiyati & Setyawati, (2020) explained that financial management requires the right party, structured distribution, to the belief that the money owned belongs to God, thus motivating individuals to guarantee better financial conditions, which are supported by (Fairholm & Gronau, 2015; Mariska, 2018).

The results of processing the validity of data on Church Performance show that the CP2 indicator is not used, where the lack of financial management in the parish has an impact on the trust given by parishioners and donors for the development of the Church. It can affect the development of quality resources such as training, system updates, to program evaluation which tends to reduce Church performance as stated (Zapo & Meiden, 2021).

#### 4.2 Reliability Test

Reliability testing aims to increase the accuracy and confidence of the data used to be projected as an adequate research result (Hair et al., 2019). This study analyzes with SEM-PLS, where the entire series of data validity and reliability tests are based on Hair et al., (2019).

Variables	Composite reliability	Average variance extracted (AVE)
D_TA1	0.809	0.586
D_TA2	0.782	0.555
D_TA3	0.830	0.710
D_TA4	0.780	0.542
D_FMS1	0.806	0.675
D_FMS2	0.759	0.617
D_FMS3	0.745	0.594
D_CP1	0.658	0.547
D_CP2	0.623	0.510

Table 4. Validity Construct and Reliability Data

D_CP3	0.795	0.664
D_CP4	0.714	0.557
Jota: D means Dimension D	TA1 – Dimension of Technology	Adoption 1

**Note:** D means Dimension. D\_TA1 = Dimension of Technology Adoption 1

In analyzing the Validity and Reliability of data, tests are carried out based on variable dimensions, because this study builds a second-order construct that represents several research indicators in a variable. Some indicators are based on variable dimensions and these dimensions will lead to the main variable (First order), so data processing uses second order. Based on the data in the table above, shows that all data on variable indicators for composite reliability are reliable because they have reached the minimum criteria of 0.60 (Hair et al., 2019). In addition, in AVE all data can be processed further because it reaches >0.50 (Hair et al., 2019).

#### 4.3 Hypothesis Testing

After processing and testing the validity and reliability of data using SmartPLS Ver 4, hypothesis testing in this study through bootstrapping refers to (Ghozali &; Latan, 2015; Hair et al., 2019). The hypothesis that has been developed in this study needs to be tested based on data obtained from respondents to find out the results of the study.

Table 5. Hypothesis Testing (Bootstrapping)

	T statistics	P values
$TA \rightarrow CP$	5.192	0.000
FMS → TA	4.121	0.000
FMS  CP	0.037	0.485

Based on the results of the hypothesis testing above, it shows that hypothesis 1 in the relationship of Financial Management Spirituality has a significant effect on Technology Adoption because it shows that T-Statistics matches the criteria, which is 4.121 > 1.96 and P-Values of 0.000 > 0.05. According to Purbiyati & Setyawati, (2020) financial management requires the spiritual support of individuals to act correctly according to the management rules and procedures directed by leaders to improve the quality of service to people as a way to implement God's finances effectively, but in this study adding context use of technology in the financial decision-making process to improve Church performance.

Hypothesis 2 also shows that the relationship between Technology Adoption has a significant positive effect on Church Performance. According to Ghozali & Latan, (2015) and Hair et al., (2019) the criteria for a hypothetical relationship result in a need to reach >1.96 in T-Statistics which indicates the influence of a relationship between variables with the significance level of P-Values <0.005, where all the hypotheses have a significant effect. The test results following (Kristianus et al., 2022; McKinney, 2020; Raudeliūnienė, 2022; Zapo & Meiden, 2021) that the application of technology helps the Church to carry out its activities in a flexible way, such as facilitating the allocate budgetary funds, carry out spiritual programs effectively, the ministry that covers the congregation in general. The result of this study shows the implementation of technology in the Church has great potential and has been implemented, thus responding to the gap of Chow & Kurlberg, (2020) related to the debate about leaders who judge technology as not compatible with the mission of the Catholic Church.

However, hypothesis 3 shows Financial Management Spirituality does not affect Church Performance, which is 0.037 < 1.96 and 0.485 > 0.005. It can be concluded that manual financial management requires complicated procedures, which reduces the satisfaction of the servers in the management of the Church's finances. The results support Mennel et al., (2016), which motivates users, but spirituality does not directly impact financial performance.

#### 4.4 Discussion

Based on the entire process of processing and analyzing research data to hypothesis testing, here are

some explanations of the research results:

• Hypothesis 1 shows financial management spirituality has a significant effect on Technology Adoption, which fits the criteria of the test (Ghozali &; Latan, 2015; Hair et al., 2019). The implementation of combined spirituality with financial management has not been widely applied to the Catholic Church, where Purbiyati & Setyawati, (2020) used the term to analyze the process of distributing funds in the Church which has an equal distribution of responsibilities, rules governing the management of Church funds, to the impact on service to the people.

Several studies adopted spirituality as a variable that motivates and encourages individuals and leaders to manage organizational finances that have an impact on workforce prosperity, the risk of fraud is getting smaller, to the level of stakeholder trust is getting bigger (Fotaki et al., 2020; Fry et al., 2010; Mariska, 2018; Zapo & Meiden, 2021). According to Danes et al., (2016) the dimension of spirituality is an approach that goes beyond traditional financial management techniques that influence the behavior and actions of leaders in making decisions. However, this variable shows an element of novelty that the research indicators also show the results of the adoption of financial statement recording standards that have not followed accounting standards due to different preparation methods in the Church. But the research shows that it takes spirituality to embrace technology in order not to commit fraud, as mentioned by Kurniawan & Mulyawan, (2023) showing the rapid rate of cyber attacks and data theft due to vulnerabilities in the system used by individuals.

• Hypothesis 2 shows the relationship between technology adoption which has a significant positive effect on Church performance, where the results in this study are in line with (Kristianus et al., 2022; McIntosh, 2015; McKinney, 2020; Singarimbun, 2021; Sinibaldi et al., 2020) which shows the form of technology-based Church transformation helps improve operational activities, in the form of carrying out worship that reaches people widely and flexibly (Youtube), the distribution of aid funds and volunteer programs that quickly help the surrounding environment, to the development of Catholic education for spiritual formation. In addition, Peter et al., (2020) explained that technology expands opportunities for Church servants, so to maintain the gap in resource capabilities with technological advances, regular training is needed by monitoring ministry activities and administrative processes that take place in the Church.

However, the results of this study contradict Chow & Kurlberg, (2020) which shows that in Asia and Europe, there is controversy among Church leaders who consider the existence of technology not following sacred traditions and the implementation of Church services, following Pearce et al., (2010) which shows that innovation causes incompatibility with the Church. Wulandari, (2019) stated some priests in the Archdiocese of Jakarta have innovated to find new ways of conveying information to the people, but the results of this study were also opposed by Kristianto & Wang, (2020) who explained that in the Archdiocese of Jakarta, there was an application silo due to the high turnover of Church servants which caused database updates to be hampered or less distributed to the next generation, thus influencing the Church's decision-making process.

• Hypothesis 3 shows financial management spirituality does not affect Church performance in the Archdiocese of Jakarta. The results of the issuance of these indicators are interconnected with each other, since although the analysis of the FMS3 indicator shows results that finances are managed honestly, the lack of a clear division of responsibilities and authorities generates a lack of clarity in the financial management, resulting in decreased donor confidence in funding parish services. The results of this study support Menne et al., (2016) that spirituality does not directly affect financial management but strengthens accountability following the

results of the test of hypothesis 2 of this study where it needed other elements to support the spirituality.

The lack of financial governance as the main resource in addition to serving the Church in the Parish, has the potential to decrease the empowerment of organizational capacities and the ability of Church servants through training to improve the quality of services to congregations. In addition, although the results of the analysis of the FMS4 indicator show that there is an SOP (Standard Operation Procedure) when establishing the flow of financial management as in the research by Purbiyati & Setyawati, (2020) and Mariska, (2018), the lack of division of responsibilities also reduces oversight of the Daily Parish Council to identify if it is used for the satisfaction of congregations.

#### 4.5 Research Implications

This study aims to obtain information on the number of respondents representing the population, where a census was carried out in each parish under the auspices of the Archdiocese of Jakarta to support the results of the study. Seeing that the results of previous research focused on the Church amid dynamic changes that are increasingly rapid causing inconsistency, this study uses variable technology adoption with several indicators developed according to the operation of the system in the Church. Technological advantages can turn into risks such as cyber-attacks due to vulnerable systems (Kurniawan &; Mulyawan, 2023), where according to Gangwar et al., (2015) added security to analyze the operational conditions of the organization. Internal control is an important factor that needs to be developed within the Church, especially in the implementation of advanced technology to submit financial reports that are free from elements of fraud by involving the role of a leader to maintain the integrity of financial flows. In addition, a census was conducted of all parishes that have Daily Parish Councils as gaps were found by Wulandari, (2019) and Chow & Kurlberg, (2020) regarding differences of opinion of Church leaders regarding the application of technology.

Based on the results of the research obtained, it can be concluded that Church leaders have been aware of technological developments and understand the factors of their usefulness for ministry, although the application has not been maximized because of high price conditions, there is also a lack of competence of resources in implementing it. However, in some ways such as the implementation of worship, fundraising, to the implementation of meetings between leaders have used technological assistance and are considered to increase effectiveness and flexibility. It is supported by the results showing that technology adoption affects Church performance, proving that technology has become an important factor in developing human resource performance. The existence of sophisticated technology significantly helps to improve the Church's performance, where leaders have to understand the internal needs that can be adapted to technology to avoid obstacles in the process of Church activities, as conveyed by the Pope in the Vatican (Sinibaldi et al., 2020).

In addition, the emergence of gaps due to not many who have adopted financial spirituality management of the Church is the basis for research to develop several indicators aimed at all parishes of the Archdiocese of Jakarta. The element of financial spirituality management is a new term that aims to analyze and evaluate the entire series of financial management in the Church based on rules and standards and the existence of a clear flow structure to support the distribution of parish funds. Through this research, it can be concluded that parishes need a clear distribution structure accompanied by rules that increase accountability and assurance for the presentation of financial statements in the Church. The financial governance of the Church is based on Christian values as stated by Purbiyati & Setyawati, (2020) where the results of this study, with the adoption of sophisticated technology, help to increase the flexibility of the presentation of financial data to produce agile solutions to other servants and congregations.

# 5. Conclusion

In this study, it can be concluded that all the variables used have a significant effect on the performance of the Church, where spiritual financial management is the main variable which is the update of this study to analyze the general financial management that is carried out in the church honestly, transparently, and accountable. All Parishes believe that all money they possess belongs to God and must be administered according to the needs of the Church and the well-being of the congregations through resources that support the service process.

In the process of its ministry, the Church has relied on the use of technology, which in the results of this study shows a significant effect on Church performance. The Daily Parish Council has adopted technology that is following the procedures and implementation of worship services, helping to complete tasks effectively and helping to carry out spiritual programs that increase people's satisfaction and the number of active servants of the Church. It shows the acceptance of advanced technology in the Catholic Church helps to improve the ministry.

This research aims to build a contribution that minimizes the gap and inconsistency of research on the Church amid increasingly rapid digital development, which also adds variable elements of financial management spirituality as new things that need to be explored more deeply in future research. Furthermore, adopting financial management spirituality could help to evaluate the financial condition of parishes. The implementation of advanced technology requires the spirituality of people to carry out responsibilities following rules and procedures, especially in managing finances that are used for the benefit of the congregation and the Church.

However, the limitations of this study are obtaining data that is representative of each parish to determine the performance of all parishes under the auspices of the Archdiocese of Jakarta. However, larger data can be obtained across parishes in other areas and parishes in Indonesia to further analyze the diffusion of technology in the Catholic Church's operations. The technology adoption in this study remains general because it looks at church operations that aim to improve service quality. Additionally, the implications of spiritual financial management can be explored by conducting interviews to develop further understanding because the term is still new and not well-known to research respondents. In addition to the census, future research can be explored more in-depth by examining several things that can be the basis for conducting interviews with the Catholic Church, especially by having an attitude of spirituality amid the growth of technology that affects Church performance.

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