

Digital Marketing and Post-Pandemic Christian Practice in Ghana: Congregants' Perceptions across Five Greater Accra Churches

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DOI: <https://doi.org/10.47772/IJRISS.2026.100800196>

Received: 20 August 2026; Accepted: 25 August 2026; Published: 31 August 2026

ABSTRACT

COVID-19 restrictions accelerated the use of livestreaming, social media, digital payments and online religious resources by churches. Evidence about whether these practices retained value after restrictions eased remains limited in Ghana. This study examined congregants' perceptions of digital marketing and Christian practice across five Pentecostal-Charismatic churches in Greater Accra. A cross-sectional online survey generated 281 usable responses, supplemented by a semi-structured interview with a senior Ghanaian church leader. The voluntary non-probability sample was highly digitally engaged and does not represent Ghanaian Christians nationally. Twelve five-point Likert items measured perceived effects on connection, gospel dissemination, worship access, religious resources, participation, audience reach, community, outreach, adaptation, dependence and giving. Descriptive statistics and two chi-square tests of independence were used. Ninety per cent of respondents reported active social-media use. Agreement was strongest for maintaining member connection (94.0%), spreading the Christian message (94.0%), supporting worship services and religious events (94.0%), improving access to religious resources (92.5%) and reaching people beyond physical services (91.8%). Agreement was lower for strengthening community (72.2%), enabling charitable outreach (66.9%), creating institutional dependence (60.9%) and increasing or facilitating digital giving (52.7%). Perceived dependence on digital marketing was significantly associated with perceived member connection, $\chi^2(16, N = 281) = 97.82, p < .001$, Cramer's $V = .30$, and resource access, $\chi^2(16, N = 281) = 179.95, p < .001$, Cramer's $V = .40$. The interview contextualised these results by identifying wider reach and remote giving alongside distraction, privacy exposure, impersonation fraud and possible substitution of online viewing for physical attendance. The findings indicate that digital channels have become persistent components of Ghanaian church communication, but their perceived value is uneven across outcomes. Churches should therefore pursue governed hybrid ministry, combining measurable digital access with embodied fellowship, safeguarding and financial transparency.

Keywords: digital marketing; digital religion; Christian communication; COVID-19; Ghana

INTRODUCTION

The COVID-19 pandemic disrupted the physical routines through which many religious communities worshipped, communicated and mobilised resources. Ghanaian churches responded by expanding livestreamed services, social-media communication, digital giving and the online distribution of sermons, devotionals and event information. These practices emerged within a religiously significant and increasingly connected national environment. Ghana's 2021 Population and Housing Census reported that approximately 71.3% of the population identified with Christian categories [1]. By the third quarter of 2024, the National Communications Authority recorded 25.56 million active mobile-data subscriptions and a subscription penetration rate of 77.63%, although subscriptions do not represent unique individuals [2]. Digital access therefore offered considerable reach while remaining unevenly distributed.

The pandemic provided an exceptional stimulus for religious digitisation. Research with Ghanaian Christian leaders documented the psychospiritual, communal and financial effects of restrictions on religious gatherings [3]. Subsequent work showed that the shift to virtual interaction enabled continuity but also raised questions about relationality, place and the social consequences of disembodied participation [4]. The relevant post-

pandemic question is consequently more precise than whether churches used digital platforms during an emergency. It concerns which perceived benefits persisted, which outcomes remained uncertain, and what institutional risks accompanied sustained use.

In this article, digital marketing means the planned use of digital channels and data-enabled touchpoints to communicate value, engage audiences and facilitate response [5]. Within churches, this definition includes social-media content, livestreams, websites, online advertising, messaging platforms, digital resources and payment pathways. The term overlaps with digital religious communication and digital ministry. Networked-religion scholarship treats online and offline practice as connected, while pandemic research on the distanced church highlights the institutional and theological questions created by rapid digitisation [6, 7]. This overlap requires care because church communication serves pastoral, liturgical and missional purposes that cannot be reduced to commercial exchange. The study therefore assesses digital marketing as a communication infrastructure rather than as evidence that religious participation is equivalent to consumer behaviour. Ghanaian scholarship has established that churches were active media institutions before COVID-19. Televised charismatic Christianity had already shaped public religious experience [8], while marketing communication research linked church promotion with attendance and highlighted radio public relations [9, 10]. Studies of Facebook and other social platforms later demonstrated their missional reach, relationship-building potential and growing administrative use [11-13]. Much of this evidence focused on leaders, individual churches or the pre-pandemic period. Fewer studies measured post-pandemic congregant perceptions across several churches and across multiple outcomes such as community, giving, resource access, outreach and dependence.

This study addresses that gap with evidence from 281 respondents in five Pentecostal-Charismatic churches in Greater Accra and a contextual key-informant interview. The article contributes in three ways. First, it distinguishes strongly endorsed communication outcomes from more contested relational and financial outcomes. Second, it reports inferential results as associations rather than causal effects. Third, it connects perceived benefits with governance concerns, including privacy, fraud, distraction, digital exclusion and the preservation of embodied community.

Research Questions and Hypotheses

The study addressed two research questions:

- How do congregants perceive the post-pandemic contribution of digital marketing to communication, worship access, resource dissemination, participation, community, outreach, adaptation, dependence and giving within Ghanaian churches?
- Is perceived institutional dependence on digital marketing associated with perceived member connection and access to religious resources?

The following hypotheses guided the association tests:

H1: Perceived dependence on digital marketing is associated with the perception that digital marketing helps churches remain connected with members.

H2: Perceived dependence on digital marketing is associated with the perception that digital marketing improves access to religious resources.

LITERATURE REVIEW

Digital Religion, Communication and Hybrid Practice

Digital religion describes the interrelationship between online media and lived religious practice. Campbell's concept of networked religion explains how digital environments can produce networked communities, multisite practice, shifting authority and convergent online-offline religious activity [6]. This perspective avoids treating online and physical religion as separate worlds. It instead asks how religious identity, participation and authority are reorganised across connected settings.

The pandemic made these questions operational for churches. Campbell's work on the distanced church documented rapid experimentation with online worship and raised theological and organisational questions about what constitutes presence, participation and community [7]. Ghanaian evidence similarly shows tension between continuity and relational loss. Osei-Tutu et al. found that restrictions affected fellowship, spiritual life, well-being and church finances, prompting leaders to deliver spiritual and public-health support through alternative channels [3]. Adams et al. argued that virtual interaction enabled connection while potentially abstracting social relations from place and embodied mutuality [4]. Recent post-pandemic scholarship continues to emphasise embodiment, suggesting that digital participation tends to supplement rather than eliminate the social importance of physical religious practice [16].

These arguments imply that reach is an incomplete measure of religious communication. A stream may be viewed without focused participation, a social-media follower may have limited attachment to a local congregation, and a convenient payment channel does not prove increased generosity. Digital metrics can document exposure, response and conversion events, but theological and communal outcomes require additional evidence. A critical assessment should therefore separate communication access from deeper community, behaviour and spiritual formation.

Ghanaian Churches and Media Adoption

Ghanaian churches have a long history of adapting media to mission. De Witte's study of televised charismatic Christianity showed how audiovisual mediation shaped religious authority and experience before contemporary social media [8]. Appiah, Dwomoh and Kyire found a positive relationship between church promotion and attendance growth among six charismatic churches, with radio public relations exerting the strongest influence in their model [9]. Acheampong's thesis similarly examined how marketing communication affected church growth in Ghana [10]. These studies show that the digital turn extended an existing media culture rather than creating mediated Christianity for the first time.

Social media widened this media ecology. White, Tella and Ampofo found that Ghanaian Pentecostal pastors used Facebook for evangelistic and missional purposes and attracted followers across religious and social backgrounds [11]. Akuokoh's case study of the Maker's House Chapel International reported that Facebook, WhatsApp and YouTube supported global reach and low-cost communication, while also identifying addiction, distraction and possible reductions in physical attendance [12]. Darko-Adjei, Animante and Akussah found high awareness and operational use of social-media platforms among leaders in two charismatic churches, together with the value of documented policies [13].

The post-pandemic environment amplifies both the opportunity and the risk. Adjin-Tettey and Kwofie's Ghanaian study of a virtual church found that the expansion of online church content created material concerns about safety, security, unauthorised access and privacy [15]. These concerns are especially relevant where services display congregants, testimonies, children, financial appeals or pastoral information. Digital growth without governance may expand exposure while weakening trust.

THEORETICAL FRAMEWORK

Rogers' Diffusion of Innovations theory explains how innovations spread through communication channels over time and how perceptions of relative advantage, compatibility, complexity, trialability and observability influence adoption [14]. The pandemic compressed this process. Physical restrictions increased the relative advantage of livestreaming, social media and electronic giving, while churches observed neighbouring institutions using similar tools. Emergency adoption, however, does not guarantee mature or equitable use. Post-pandemic continuation depends on whether congregants and leaders experience continuing value and whether organisations build the capabilities required for reliable use.

In the present study, perceived gains in connection, message dissemination, worship access, resource access and audience reach are treated as indicators of relative advantage. Their visibility through livestreams, searchable content and shareable posts reflects observability, while continued use after restrictions eased indicates perceived compatibility with established ministry practice. Privacy exposure, fraud, distraction and

uneven participation illustrate complexity and potential consequences of adoption. Trialability and the timing of individual adoption decisions were not measured.

Networked religion complements diffusion theory by explaining what adoption changes within religious life [6]. Digital tools can extend communities across locations, converge online and physical practices, and redistribute communication authority among clergy, media teams, platform providers and users. Together, the theories suggest two analytical expectations. First, greater perceived dependence should be associated with benefits central to continued use, particularly connection and resource access. Second, diffusion should remain uneven because communication access, relational community, giving and outreach involve different behavioural and institutional mechanisms.

Within networked religion, high access and reach scores represent networked community and convergent online-offline practice. Lower agreement on community and participation reflects the limits of translating embodied fellowship into mediated contact. Platform risk, impersonation and account control illustrate shifting communication authority and porous institutional boundaries. These propositions guide the explicit theory-to-evidence mapping in the Discussion.

The study does not test every construct in either theory. It uses them as interpretive frameworks for a post-adoption setting. This distinction matters because the questionnaire measures respondents' perceptions of outcomes, not the full innovation-decision process, platform analytics, actual attendance, financial records or spiritual change. The framework is therefore used to explain patterns among the participating respondents, not to claim a complete empirical test of either theory.

METHOD

Research Design

The study used a cross-sectional survey supplemented by a semi-structured key-informant interview. A pragmatic orientation guided the combination: the survey measured the distribution of congregant perceptions, while the interview provided institutional context for interpreting those perceptions. The design is predominantly quantitative. One interview cannot establish thematic saturation or represent the diversity of Ghanaian church leadership, so the qualitative material is used for contextual explanation rather than independent generalisation.

Cross-sectional perception data can identify patterns and associations, but they cannot determine whether digital marketing caused changes in attendance, giving, belief or church growth. The article therefore uses terms such as perceived contribution, agreement and association instead of causal language.

Setting, Participants and Recruitment

Respondents were recruited from five Pentecostal-Charismatic churches in Greater Accra: Perez Chapel International, the International Central Gospel Church, Royalhouse Chapel International, Victory Bible Church International and Action Chapel International. The intended quota was 50 respondents per church, giving a target of 250. A Google Forms link was distributed through church networks, and 281 completed questionnaires were retained. Because the total number of people who received or opened the invitation was not recorded, a conventional response rate cannot be calculated. The distribution procedure is most accurately classified as voluntary non-probability sampling rather than population-based random sampling [17, 18].

The achieved church distribution was 59 respondents from Perez Chapel International, 50 from the International Central Gospel Church, 69 from Royalhouse Chapel International, 53 from Victory Bible Church International and 50 from Action Chapel International. All recorded age responses fell within adult categories; age was missing for 31 respondents. Social-media activity was reported by 253 respondents (90.0%), indicating that the sample was highly digitally engaged.

Sampling Rationale and Scope Conditions

Voluntary online recruitment was used because the study sought post-pandemic perceptions among congregants exposed to church digital communication across several institutions, while complete membership sampling frames and platform-user lists were unavailable across the five churches. The approach enabled cross-church recruitment within the study's access and resource constraints, but it did not give each congregant a known probability of selection. The sample is therefore exploratory and analytical rather than statistically representative of Ghanaian Christians or of all members in the participating churches [17, 18].

Accordingly, the reported percentages describe the 281 respondents only and should not be read as national prevalence estimates. Transfer of the findings is most defensible to digitally engaged adults in large Pentecostal-Charismatic churches in urban Ghana. Application to rural churches, historic mission denominations, smaller congregations, digitally excluded people or other national settings requires contextual verification.

Table 1. Participant Characteristics (N = 281)

Characteristic	Category	n	% of total
Sex	Male	170	60.5
Sex	Female	111	39.5
Age	18-25 years	49	17.4
Age	26-35 years	93	33.1
Age	36-50 years	51	18.1
Age	51 years or older	57	20.3
Age	Missing	31	11.0
Church	Perez Chapel International	59	21.0
Church	International Central Gospel Church	50	17.8
Church	Royalhouse Chapel International	69	24.6
Church	Victory Bible Church International	53	18.9
Church	Action Chapel International	50	17.8
Social-media use	Active	253	90.0
Social-media use	Not active	28	10.0

Note: Percentages may differ from 100.0 because of rounding. Age was reported by 250 respondents.

Instrument and Pilot Testing

The questionnaire included participant information and electronic consent, demographic questions, a social-media-use item and 12 substantive statements. Responses to the substantive items used a five-point Likert scale ranging from strongly disagree to strongly agree. The items covered member connection, dissemination of Christianity, access to worship and religious events, access to resources, engagement and participation, audience reach, overall impact, sense of community, charitable outreach, adaptation, dependence and digital giving.

The instrument was piloted before fieldwork. The pilot identified duplicated wording, missing response options, unclear instructions and questions that had not been configured as required fields. These issues were revised before distribution. The pilot provides evidence of operational refinement and face adequacy, but it does not establish reliability, convergent validity, discriminant validity or measurement invariance.

Questionnaire Quality and Construct Interpretation

The 12 substantive statements were designed as separate single-item indicators of different perceived outcomes rather than as interchangeable items in one reflective scale. Connection, message dissemination, worship access, resource access, participation, community, adaptation, dependence and giving are conceptually distinct. An omnibus Cronbach's alpha would therefore be difficult to interpret because internal consistency assumes items share a common latent core. Reliability for each single item also cannot be estimated from internal consistency alone. Methodological research advises caution with single-item measures and generally favours multi-item scales when abstract constructs are being assessed [20].

No respondent-level dataset was available during this revision. Item correlations, factor structure, test-retest reliability, predictive validity and measurement invariance could therefore not be re-analysed. The evidence available is limited to pilot-based wording checks, item-to-objective alignment, complete aggregated response tables and internal reconciliation of published counts.

Findings are consequently interpreted at item level as respondent perceptions, not as validated latent construct scores. Future instruments should use several items for each domain and report expert content review, cognitive interviewing, internal consistency where conceptually appropriate, and exploratory or confirmatory factor analysis in an independent sample.

Key-Informant Interview

A semi-structured interview was conducted with Archbishop Charles Agyinasare, founder of Perez Chapel International and a long-standing user of broadcast and digital media in Christian ministry. Questions addressed the timing and growth of digital adoption, influential platforms, effects on outreach, attendance and giving, implementation challenges, future use and message integrity. The interview was transcribed and reviewed for recurrent explanatory themes. Because the interviewee was purposively selected and professionally connected to the author, the material is treated as an informed institutional perspective rather than neutral corroboration.

Data Quality and Corrections

The conversion of the original research report into this article included an audit of its item tables, grouped summaries and embedded chart workbook. The audit identified several transcription inconsistencies. Three corrections were supported by agreement between the embedded workbook, percentages and grouped totals: Statement 1 recorded 168 strongly agree responses rather than 163; Statement 6 recorded 17 neutral responses rather than 7; and Statement 12 recorded 42 strongly agree and 4 strongly disagree responses, rather than the reverse. For Statement 9, the published table values were retained because they sum to 281 and match the percentages; one embedded chart cache incorrectly duplicated 57 as the strongly disagree count. The narrative reported 280 returns in one location, but the consent, demographic and item tables consistently used 281. This

article therefore uses $N = 281$ and discloses the corrections to preserve an auditable record. The respondent-level survey file and the chi-square contingency tables did not accompany the article file used for revision; consequently, the published aggregate results could be audited, but the psychometric structure and expected-cell assumptions could not be independently reconstructed.

Analysis

Frequencies and percentages were calculated for each response category. To improve interpretation, strongly agree and agree were grouped as agreement, while disagree and strongly disagree were grouped as disagreement. Neutral responses remained separate. The grouped results do not erase the original five-category data used in inferential testing. The digital-giving item was retained for descriptive reporting but was not used in the association tests because its wording combined convenience with increased giving and the two propositions could not be separated.

Two Pearson chi-square tests of independence examined associations between perceived dependence on digital marketing and, respectively, perceived member connection and perceived access to religious resources. The significance level was set at .05. Cramer's V was calculated from each reported chi-square statistic to indicate effect size [19]. The tests establish whether response patterns are associated; they do not identify temporal order, causal direction or which institutional practices produced the pattern.

Ethics and Researcher Positionality

All survey respondents completed an electronic informed-consent statement. Participation was voluntary, and the questionnaire stated that identities would be protected. The key informant participated in a named interview. The source study states that institutional authorisation was sought from the London School of Business and Finance. No formal approval or exemption identifier was recorded in the source documentation available for this revision, and no identifier is therefore reported.

The author's professional work in communications at Perez Chapel International facilitated contextual understanding and access, but it also creates a potential for selection and interpretive bias. This relationship is disclosed and addressed through cautious language, item-level reporting, explicit data corrections and limitations on generalisation.

RESULTS

Perceived Outcomes of Digital Marketing

Table 2 presents the grouped distribution for the 12 outcome statements. The strongest consensus concerned communication continuity and access. Agreement reached 94.0% for member connection, dissemination of the Christian message, and benefits for worship services and religious events. A further 92.5% agreed that digital marketing improved access to sermons, devotionals, scripture and related resources, while 91.8% agreed that it helped churches reach people who might not attend physically.

The results became more qualified for outcomes requiring deeper behavioural or relational change. Positive engagement and participation received 74.4% agreement, while 21.0% remained neutral. Strengthened community also received 72.2% agreement and 21.0% neutrality. Charitable and outreach opportunities attracted 66.9% agreement and 26.3% neutrality. These distributions indicate perceived value but less unanimity than the access-oriented items.

Dependence and giving were the most contested outcomes. Although 60.9% agreed that churches had become dependent on digital marketing, 24.6% were neutral and 14.6% disagreed. Only 52.7% agreed that people give more or find digital giving more convenient than cash; 33.8% were neutral and 13.5% disagreed. The combined wording of increased giving and convenience prevents the study from separating an attitudinal preference for convenience from an actual increase in donation value. The giving result is therefore treated as a composite descriptive perception only. It is not interpreted as evidence that digital channels increased donation frequency or value.

Table 2. Grouped Responses to Digital-Marketing Outcome Statements (N = 281)

Perceived outcome	Agree n (%)	Neutral n (%)	Disagree n (%)
Maintained connection with members	264 (94.0)	12 (4.3)	5 (1.8)
Helped spread the Christian message	264 (94.0)	12 (4.3)	5 (1.8)
Benefited worship services and religious events	264 (94.0)	13 (4.6)	4 (1.4)
Improved access to religious resources	260 (92.5)	15 (5.3)	6 (2.1)
Improved engagement and participation	209 (74.4)	59 (21.0)	13 (4.6)
Extended audience beyond physical attendance	258 (91.8)	17 (6.0)	6 (2.1)
Produced an overall positive impact	242 (86.1)	32 (11.4)	7 (2.5)
Strengthened community and connection	203 (72.2)	59 (21.0)	19 (6.8)
Enabled charitable and outreach activity	188 (66.9)	74 (26.3)	19 (6.8)
Demonstrated successful church adaptation	231 (82.2)	39 (13.9)	11 (3.9)
Created continuing dependence on digital tools	171 (60.9)	69 (24.6)	41 (14.6)
Increased or facilitated digital giving	148 (52.7)	95 (33.8)	38 (13.5)

Note: Agreement combines agree and strongly agree. Disagreement combines disagree and strongly disagree. Percentages may differ slightly from 100.0 because of rounding.

Association Tests

Both chi-square tests were statistically significant. Perceived dependence on digital marketing was associated with perceived connection between churches and members, $\chi^2(16, N = 281) = 97.82, p < .001$. Cramer's V was .30, indicating a moderate association. Perceived dependence was also associated with perceived resource access, $\chi^2(16, N = 281) = 179.95, p < .001$, with Cramer's V = .40. The second association was stronger.

Table 3. Associations between Digital Dependence and Perceived Outcomes

Variables	chi-square	df	p	V	Interpretation
Dependence and member connection	97.82	16	< .001	.30	Moderate association
Dependence and resource access	179.95	16	< .001	.40	Moderate association

The tests support H1 and H2 as association hypotheses. They do not demonstrate that dependence caused connection or resource access. A plausible alternative is reciprocal reinforcement: churches continue using digital systems because congregants value access, while sustained institutional use makes those benefits more visible and expected.

Key-Informant Perspective

The interview produced four contextual themes. First, digital platforms expanded visibility and geographic reach. Facebook, Instagram, YouTube and X were identified as important channels through which people could encounter ministry activities beyond a local service. Second, remote participation created financial access by allowing people at a distance to give electronically. This observation supports the convenience element of the giving item, but it does not resolve whether total giving increased. Third, digital participation created behavioural and safeguarding challenges. The interviewee identified distraction during home viewing, the possibility that online convenience could discourage some physical attendance, accidental exposure of family members or private domestic settings, and fraudulent accounts that impersonate church leaders. Fourth, the interview framed continued digital adoption as strategically necessary. Churches that fail to develop digital capability may lose visibility and audience connection, yet technological expansion should preserve the integrity of the Christian message and be supported by deliberate investment. These themes align with the survey's hierarchy of outcomes. Reach and access received very high agreement, while community, dependence and giving attracted greater uncertainty. The interview also supplies risks that the closed-ended questionnaire did not directly measure.

DISCUSSION

Communication Access Is the Clearest Post-Pandemic Legacy

The strongest result is the consistency of perceived communication benefits. Approximately nine in ten respondents agreed that digital marketing maintained connection, spread Christian messages, supported worship and events, improved resource access and extended audience reach. This pattern suggests that churches and congregants no longer view digital channels solely as emergency substitutes. They function as continuing infrastructure for distributed communication.

This conclusion extends earlier Ghanaian studies. White et al. documented the missional potential of Facebook among Pentecostal pastors before the pandemic [11]. Darko-Adjei et al. later found high awareness and operational social-media use among charismatic church leaders [13]. The present study adds a multi-church congregant perspective after the acute pandemic period. It indicates that respondents perceive persistent utility in accessing messages and services across location and time.

Diffusion theory helps explain this persistence. Restrictions increased the relative advantage and observability of digital channels, while repeated use reduced uncertainty and embedded new expectations [14]. However, the significant association between dependence and resource access should not be interpreted as evidence that greater dependence is automatically desirable. Dependence may reflect valuable institutional capability, vulnerability to platform disruption, or both.

Access Does Not Automatically Produce Community

Agreement declined from more than 90% on access-oriented items to 72.2% on strengthened community and 74.4% on engagement and participation. The difference is theoretically important. Networked religion recognises that online and offline practices converge, but it does not assume that digital contact reproduces every feature of embodied fellowship [6]. Ghanaian leaders interviewed by Adams et al. similarly questioned whether virtual interaction could sustain relational forms grounded in place and interpersonal presence [4].

The survey does not show that digital participation weakens community. Most respondents still reported a positive perception. It does show that community claims attracted more neutrality and disagreement than communication claims. The distinction supports a hybrid model in which digital tools extend access while physical gatherings retain distinctive value for shared ritual, pastoral observation, mutual care, volunteering and informal relationships. Post-pandemic research on embodied religion reaches a comparable conclusion: digital practice can persist while bodily co-presence remains central to religious life [16].

Giving Requires More Precise Measurement

The giving item received the weakest agreement and the highest neutrality. This result should temper claims that digital marketing increased church revenue. The item combined two propositions: that people give more and that digital platforms are more convenient than cash. A respondent could agree with convenience while rejecting increased amount, or the reverse. Perception data also cannot substitute for transaction records. The key informant confirmed that distance is less of a barrier to giving when electronic channels are available. This is a credible mechanism, but future research should separate adoption, convenience, frequency, amount, recurring giving, donor geography and trust. Churches should also distinguish pastoral appeals from financial marketing and disclose fees, payment security and authorised account details. These safeguards are especially important where impersonation and fraudulent accounts can redirect gifts.

Reach, Privacy and Platform Risk

The study's high reach scores coexist with practical risks. The key informant raised household exposure, distracted viewing and impersonation fraud. These concerns accord with Adjin-Tettey and Kwofie's research on privacy and security in a Ghanaian virtual church [15]. The expansion of cameras, livestreams and social content increases the volume of personal data and the number of people who may be visible beyond their original context. Churches therefore need governance that covers consent for filming, child safeguarding, testimony approval, account verification, password and access control, incident response, financial-account authentication, content archiving and the handling of prayer or counselling information. Platform reach should be evaluated alongside complaints, takedown requests, fraud incidents and response time. Ethical communication is part of digital effectiveness because trust affects participation and willingness to share or give.

Theoretical Implications

The findings support a two-stage interpretation of post-pandemic religious digitisation. Diffusion theory explains how a crisis accelerated adoption and normalised continued use [14]. Networked religion explains why adoption changes community boundaries, communication authority and the relationship between online and physical practice [6]. The survey demonstrates high perceived relative advantage in access and message dissemination, while the more divided community and giving results reveal that diffusion is outcome-specific.

The association results further indicate that dependence is linked more strongly with resource access than with connection. This may mean that searchable, replayable and shareable resources create a clearer functional reliance than relational interaction does. The interpretation remains provisional because the study did not measure usage frequency, platform mix, digital competence or organisational investment. Future models should distinguish capability from dependence: capability refers to the governed ability to use digital systems effectively, while dependence refers to the cost or difficulty of operating without them.

Table 4 maps the empirical patterns directly onto the constructs used from Diffusion of Innovations and Networked Religion. The mapping is interpretive because the questionnaire did not contain complete multi-item measures of either theory.

Table 4. Explicit Mapping of Empirical Findings to the Theoretical Framework

Empirical pattern	Theoretical construct(s)	Interpretation
More than 90% agreement on connection, dissemination, worship access, resources and reach	Diffusion: relative advantage and observability; Networked religion: networked community and convergent practice	Visible communication benefits retained value after emergency restrictions and became continuing ministry infrastructure.
Dependence was associated more strongly with resource access ($V = .40$) than with member connection ($V = .30$)	Diffusion: confirmation of continued use and compatibility; Networked religion: distributed resources across spatial boundaries	Searchable and replayable resources may create clearer functional reliance than mediated relational contact.
Community (72.2%) and participation (74.4%) received lower agreement than access outcomes	Diffusion: outcome-specific relative advantage and complexity; Networked religion: limits of online-offline convergence	Adoption can extend access without reproducing every feature of embodied fellowship and mutual care.
Giving received 52.7% agreement and 33.8% neutrality	Diffusion: uncertain compatibility and relative advantage; Networked religion: mediated financial practice and trust	Electronic access may improve convenience, but the composite item cannot establish increased giving.
Interview themes included privacy exposure, distraction, impersonation and platform risk	Diffusion: complexity and consequences; Networked religion: shifting authority and porous boundaries	Sustained adoption requires governance, safeguarding and account authentication, not technical use alone.

Practical Implications for Church Leadership

Churches should avoid evaluating digital ministry through follower totals or livestream views alone. A balanced framework should connect communication activity with ministry outcomes, ethical safeguards and offline participation. Table 5 translates the findings into practical priorities. These recommendations are intended for the participating urban church context and should be adapted rather than treated as universal prescriptions.

Table 5. Post-Pandemic Digital Communication Priorities for Churches

Priority	Evidence from the study	Recommended action	Example indicator
Preserve access	More than 90% agreement on connection, message dissemination, worship access, resources and reach	Maintain reliable livestream, searchable sermon archives, accessible formats and clear service information	Unique viewers, completion rate, resource downloads, returning users
Strengthen hybrid community	Community and participation received lower agreement than access	Link online participants to small groups, pastoral follow-up, volunteering and suitable physical gatherings	Follow-up response, group participation, online-to-offline connection
Improve giving evidence	Giving received 52.7% agreement and 33.8% neutrality	Separate convenience, frequency and value in reporting; publish verified payment routes and receipts	Completed gifts, repeat donors, failed payments, fraud reports
Govern privacy and security	Interview identified exposure and impersonation; Ghanaian research confirms privacy concerns	Use filming consent, role-based account access, multifactor authentication and an incident protocol	Consent coverage, access reviews, impersonation takedown time
Build inclusive capability	The sample was highly urban and digitally active	Provide low-data options, audio, messaging, telephone follow-up and digital-literacy support	Data-light usage, accessibility requests, rural or older-user reach

Implementation should assign named responsibility across ministry, media, information technology, finance, safeguarding and pastoral care. Content quality requires theological review and audience relevance, while measurement requires analytics and clearly defined outcomes. Digital investment should follow the church's mission and risk profile rather than imitate the visibility of larger ministries.

Limitations and Future Research

The study has six principal limitations. First, respondents were volunteers reached through church networks in Greater Accra. The five participating churches are established Pentecostal-Charismatic institutions, so the sample does not represent all Ghanaian Christians, rural churches, smaller congregations, historic mission denominations or independent ministries. Second, 90.0% of respondents were active social-media users, increasing the likelihood of favourable digital perceptions. These conditions bound the inference: the percentages are sample descriptions and cannot be generalised statistically to Ghanaian Christians, to all members of the five churches, or to people without digital access.

Third, the study measured self-reported perceptions at one point in time. It did not analyse platform analytics, attendance records, donation data, membership retention or spiritual outcomes. Causal claims are therefore unwarranted. Fourth, the substantive outcomes were measured with separate single items rather than validated multi-item scales. Several items also combined concepts, especially the giving item. An overall reliability coefficient would not resolve this limitation because the items do not form one unidimensional construct [20].

Fifth, the source report contained transcription inconsistencies that required correction through internal triangulation. The respondent-level dataset and chi-square contingency tables were not available during revision, so inter-item structure, factor validity and expected-cell assumptions could not be independently rechecked. Sixth, one professionally connected key informant cannot represent the range of leaders, members, digital specialists and critics required for qualitative saturation.

Future research should use stratified or multistage samples across regions, denominations, church sizes, rural and urban settings, age groups and levels of digital access. Longitudinal designs could test whether post-pandemic patterns persist and whether digital engagement predicts attendance, retention, volunteering or giving. Survey instruments should use separate multi-item measures for communication reach, attention, participation, belonging, convenience, donation frequency, donation value, trust and spiritual formation. Instrument development should include expert content review, cognitive interviews, pilot testing, reliability assessment, factor analysis and measurement-invariance tests where sample size permits. Multi-informant qualitative research should include church members, pastors, media teams, finance staff, safeguarding officers, older adults, people with disabilities and digitally excluded individuals. Platform analytics and transaction records could then be integrated with survey and interview evidence under clear consent and data-protection protocols.

CONCLUSION

Digital marketing has become a persistent component of Christian communication among the five Greater Accra churches studied. Congregants expressed strongest agreement about connection, message dissemination, worship access, religious resources and geographic reach. Their responses were more cautious about community, charitable activity, institutional dependence and giving. Significant associations linked perceived digital dependence with member connection and resource access, but the cross-sectional design does not establish causality. These results characterise the participating, predominantly digitally active respondents and should not be interpreted as national prevalence estimates. The practical conclusion is that churches should build governed hybrid capability. Digital channels can extend access and continuity, while physical religious life remains important for embodied worship, fellowship, pastoral care and accountability. Sustainable practice requires verified payment systems, privacy and safeguarding controls, inclusive low-data options, trained personnel, reliable measurement and intentional pathways between online engagement and congregational participation. The post-pandemic challenge is therefore to integrate digital reach with trusted, relational and ethically managed Christian practice.

DECLARATIONS

Ethical Approval and Consent to Participate

The source study states that institutional authorisation was sought from the London School of Business and Finance. All 281 survey participants completed an electronic informed-consent statement, and the named key informant consented to the interview. No formal institutional approval or exemption identifier was recorded in the documentation available for this revision, and no identifier is therefore reported.

Data Availability

The aggregated data supporting the findings are reported in this article. The respondent-level dataset and chi-square contingency tables were not available during revision and cannot presently be shared. The survey instrument and aggregated tables may be requested from the corresponding author, subject to participant-consent and institutional requirements.

Competing Interests

The author serves professionally in communications at Perez Chapel International, one of the sampled churches, and works with the key informant. This relationship is disclosed as a potential non-financial competing interest. No financial competing interests were reported.

Funding

The study received no external funding.

Author Contribution

The sole author conceived the study, designed the instrument, collected and analysed the data, conducted the interview and prepared the manuscript.

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