OPERATIONAL STRAIN AND SERVICE OFFLOADING IN FINTECH PLATFORM BUSINESS MODELS

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doi: 10.17977/um066.v6.i9.2026.4

Keywords

Service offloading
Customer effort score
Operational strain
Media richness theory
Mobile wallets
FinTech.

Abstract

This study investigates the operational drivers of Service Offloading, meaning that mobile wallet developers redirect app-store complaints to private, external contact channels, using Media Richness Theory (MRT), Media and the Customer Effort Score (CES) framework. The data are analysed based on the 464 developer-replied reviews collected from the top mobile-wallet developer in Iraq, “ZainCash,” and covering the whole calendar year. The developer recovery strategy was implemented as a binary (resolution in app, external deflection) and evaluated using chi-square analysis and binary logistic regression. There is a significant association between issue sensitivity and deflection (χ^2=6.723, p=.035). Developers solved 62.07% of issues in the app, with the remaining 37.93% deflected externally. While initially it was thought that technical failures would be the leading contributor to deflection, the results show that it was actually card services that proved to be the strongest predictor (OR=2.748, p=.004) and, not surprisingly, money transfers and account issues did not reach statistical significance (McFadden’s R^2=0.0290). The study suggests that the channel selection is jointly determined by informational sensitivity and diagnostic complexity, rather than financial sensitivity alone, and offers guidelines for containment strategies in the app to combat this effect, but refrains from overgeneralizing the findings based on a single case.

1. Introduction

As smartphone and electronic payment systems are infused into financial markets, especially in the Middle East and North Africa region (MENA), the markets are undergoing phenomenal digitalization and financial-inclusion growth (Al-Assaf & Abulaila, 2025). For instance, Iraq has made a dramatic transition from cash to digital wallets and electronic points of sale, which led to a swift advancement of the economy toward a modern payment system, benefiting financial inclusion and minimizing the reliance on cash (Hussein et al., 2026).

Zain Cash is the largest mobile-payment company in Iraq, capturing an estimated 98.8% of the total value of transfers processed via mobile-payment companies as of 2023 (Hussein et al., 2026). However, this fast digital transition faces structural friction, with a long-standing "trust gap," and consumers expressing concerns about privacy and financial security (Alsamman et al., 2023). Although many factors have been studied in relation to determinants of wallet- and banking-app adoption, the literature does not offer a detailed understanding of how developers actually handle complaints that are publicly posted in app stores, especially by exporting the strain of the process and cognition to the user instead of having to bear it at the initial point of interaction (External service offloading) (Al-Khafaji, 2026).

The financial services industry's digital transformation has changed the nature of the regulatory interface and the way that consumers communicate with the financial services industry. Non-bank mobile wallets are seen as a new solution to achieve financial inclusion and serve millions of sensitive transactions in developing economies where a significant segment of the population is unbanked, such as cash transfers, bill payments, digital cards, etc. The adoption has coincided with the public app stores (Google Play and the Apple App Store) becoming more than

software distribution platforms, evolving to serve a role as a de facto customer service desk and the main consumer-facing point of contact. Over the years, users have been taking advantage of public review sections to share their dismay, seek operational explanations, and demand quick solutions.

Mobile wallet apps differ from typical consumer or entertainment apps in that their use is disproportionately related to the user's operations and psychology, since their transactions are linked to real consumer assets and money. Operational faults, such as transfers being stopped, card deductions, balance discrepancies, sudden account withdrawals, etc., trigger acute psychological concerns and increased perceived financial risk. In this high-stakes setting, developer responses are more than just a matter of communication; they are a critical moment in the service-recovery process and can significantly affect customer retention, brand trust, and the platform's reputation.

But service-recovery campaigns, which occur through app store reviews, place developers in a complicated operating situation. Platform developers claim very high response percentages, and recently conducted studies suggest that a significant number of template-based responses are used which are only partially interactive. Previous studies on mobile wallet developer communication (Albesher, 2023; Al-Khafaji, 2026) suggest that when it comes to responding, it's often more about adherence to a procedure than a customized approach to dispute containment. Most importantly, developers often employ a form of Service offloading (ECD), diverting consumer complaints from their public-facing store to other, less public, avenues like hotlines, e-mail or physical locations.

Regulatory compliance/Platform-governance: This appears to be a valid reason to deflect: sponsoring companies face challenging security and regulatory requirements, and financial conflict of interest in public markets can result in personally identifiable information (PII) disclosure and violations of account privacy. The same applies to the internal account record and transaction numbers; they must also be verified something the public storefront's technical architecture can't do.

At the other end of the spectrum, from the perspective of Customer Complaining Effort and the Customer Effort Score (CES), the channel deflection causes significant operational strain for the user. Marketing and operations-management literature validate that people conserve their cognitive resources and constantly look for easy options. Complaint effort is multidimensional, as Lu et al. (2018) and Berceanu et al. (2023) illustrate, including procedural hassle, cognitive confusion, time drain and emotional exhaustion. If the developer gives the customer a hotline number or an email to send, the customer takes on the responsibilities of problem-solving, switching channels, finding contact information, waiting on hold, and retelling the issue to a new customer service representative. The customer sees it as a data-protection safeguard; the customer sees it as administrative stonewalling and operational strain, which lowers satisfaction, fairness perceptions, and customer loyalty to the app.

Media Richness Theory (MRT) is posited to provide a framework for the communicative tension that can occur as various forms of media provide different levels of feedback, cues and reduce informational ambiguity. While app-store reviews can be called an asynchronous, lean text medium, recent studies reveal that the efficiency of such channels is situational, depending on the match between its functional capacity and the complexity of the task along with the emotional state of the review author (Tkalac Verčič et al., 2025; Ardelet & Benavent, 2022). The communicative and security boundaries, which are managed by the platform representatives, are still an operational space that needs to be further theoretically grounded.

While there is some existing literature concerning developer-reply taxonomies and app rating determinants and mobile-banking technical barriers, there are three important gaps in the literature that have not yet been addressed: (1) channel deflection as a separate variable is not isolated existing literature on channel deflection or on developer-reply taxonomies, typically, treats deflecting replies as part of a wider construct without distinguishing external deflection as a clear-cut expression of operational strain; (2) empirical links between media richness and financial sensitivity are limited. There is little empirical work that has tested the relationship between financial sensitivity and deflection under any real conditions imposed by the mobile banking software and interfaces; and (3) diagnostic complexity of software failures existing mobile banking frameworks typically treat technical faults as routine self-service issues, failing to account for how

software diagnostic ambiguity and synchronization requirements (MST) shape off-platform referral decisions.

This study investigates the case of ZainCash in Iraq, which answered the review (n=464/N=619), and seeks answers to the following questions: RQ1: What is the operational distribution of Zain Cash service offloading versus in-app containment in the mobile-wallet developer replies? RQ2: issue financial sensitivity statistically significantly influence the developer's deflection externally? RQ3: To what extent do particular operational failure categories (money transfers, card services, account credentials, and technical glitches) predict the likelihood of service offloading relative to general inquiries?

This study employs a single-case design, with one application and one developer in one geographic market; it is important to remember that these conclusions about the sensitivity–deflection relationship apply to this one case and should not be interpreted as general rules for the fintech industry in general, which is discussed further in the limitations section.

1.1. Significance and Contribution

The study is significant because it is multi-disciplinary in that it addresses three areas of current research; namely service marketing and recovery literature, software engineering literature on app-review analysis, and organizational-communication literature based on the Media Richness Theory. On the theoretical side, it provides a relatively novel application for the theory, namely the interaction between the financial-app developers and users on quasi-official public platforms, as opposed to the internal-organizational/marketing context in which it was used in traditional studies. From a practical perspective, it provides the operations manager of a fintech organization with tangible quantitative data on the magnitude and distribution of operational strain caused by the existing deflections policies, allowing to make a more data-driven than impressionistic decision on effectiveness of the support channels.

Furthermore, the study is of contextual significance because there has been limited research based in emerging financial-inclusion markets, where non-bank digital wallets are the main alternative to conventional banking services (Albesher, 2023; Hassan et al., 2018). This work, which is based on an Iraqi case, contributes to diversifying the geographic and contextual foundation of the available literature.

1.2. Theoretical Framework and Hypotheses Development

1.2.1. Media Richness Theory and Situational Channel Choice

Media Richness Theory, a theory proposed by Daft and Lengel (1986), suggests that communication media vary in their ability to convey information, clarify ambiguity and promote understanding. There are four factors that determine medium richness: feedback speed, cue multiplicity (verbal and nonverbal), language variety, and personal focus. Face-to-face encounters and synchronous calls are, therefore, rich media and asynchronous text is lean media.

Store reviews become a lean and asynchronous medium in the mobile-platform contexts. Though far-reaching and visible, these reviews don't have real-time interaction, encryption or the capacity to share in-depth documentation. Recent extensions of MRT (Tkalac Verčič et al., 2025; Habil et al., 2023) have demonstrated that the choice of media depends on the nature of the task and the type of sensitivity of the user. Habil et al. (2023), who investigated the use of augmented reality in customer experience, concluded that interaction richness is not a property of the medium itself but rather depends on the interaction between the nature of the task and the capability of the medium; in this study, store reviews were found to be functionally lean and sufficient for simple tasks (basic guidance) but not for high-stakes tasks (verifying a financial account holder's identity).

When raised complaints involve money, such as when consumers say a transfer was not made or they have seen their card deducted without authorization, ambiguity and complexity ramp up. For the reasons above, developers are severely limited in the ways that they may resolve these errors. Public in-store handling means one could potentially break privacy and banking laws, so developers are forced to go with more secure, private media (phone lines, official email). In an

empirical study of the context of Iraq, Alsamman et al. (2023) confirm that perceived security and perceived trust are the strongest drivers of the stability of use of digital wallets, so that if there is a breach of either dimension, the reason for complaint is the reason for objections.

1.3. Operational Strain and Recovery Effort to the Customer

In the context of digital services, operational strain is the total behavioral, procedural, and cognitive strain that the consumer has to endure if the self-service channels are insufficient or the processing paths are not available on the spot. (Berceanu et al., 2023) Marketing and operations literature has established that customer satisfaction and customer loyalty in a digital channel depend not only on the actual recovery outcome but also on the amount of channel hassle that is avoided in reaching that outcome; some of the worst predictors of channel switching and service abandonment are channel hassle (channel switching) and re-explaining the problem (service abandonment), both of which are measured by the Customer Effort Score (CES) introduced by Dixon et al. (2010).

Service offloading is a journey interruption and channel disconnect (Voorhees et al., 2017) perpetuated by mobile-wallet developers. A platform action that is supposed to safeguard the security of banking transactions turns into a strain on the consumer's time by requiring them to come outside the storefront and repeat the complaint via alternative means (Hassan et al., 2018; Sweeney et al., 2015). This extra effort in the case of a financial fault that was not caused by the customer creates a heightened feeling of procedural and distributive injustice which diminishes the trust in the provider and encourages the consumer to leave the relationship (Kenesei & Bali, 2020; Tax et al., 1998).

The operational-strain dimensions above (procedural, cognitive, temporal, emotional) are intended as an inferential analytical framework, meaning that this wasn't a variable measured with a survey or psychometric instrument in this study. They are only used to interpret the consequences of deflection on user experience based on existing literature.

1.4. Hypotheses Development

The combination of the concepts of Media Richness Theory and complaint-effort dimensions implies that channel-deflection decisions are based on the sensitivity of the operational failure experienced:

1.4.1. Direct monetary transactions

Cash transfers and card services have direct monetary risk. The storefront interface is unable to perform confidential, secure verification, so developers divert such complaints to secret lines to preserve confidentiality, sacrificing customer satisfaction and increasing the procedure and time cost.

1.4.2. Account and login barriers

Account lockout and password recovery are security barriers that need to be addressed with proper authentication and lead to secure administrative routes to be taken by the developers.

1.4.3. Technical and software failures

These software failures don't directly impact financial loss; for example, when the application crashes or slows down. The storefront interface should provide adequate communicative richness for direct in-app resolution, since resolution is based on standard self-service steps (clearing cache, updating the app), without requiring a lot of interaction on the part of the customer.

The classical assumption, however, is subject to a modern theoretical challenge that is worth stating upfront before empirical testing. In modern app review engineering frameworks (Gao et al., 2018) and Media Synchronicity Theory (MST) (Dennis et al., 2008), the app's software failures (such as sudden crashes, authentication failures) can be considered high-complexity, high-ambiguity tasks which might necessitate a rich medium that allows the exchange of screenshots and synchronization of crash logs. A scenario that could force developers, counter-intuitively, into

external deflection rather than in-app containment. Hence, this theoretical tension means that the direction of H3 is an open (not closed) question for empirical testing.

Based on this, the following hypotheses are formulated from this study:

H_1: A statistically significant relationship exists between the financial sensitivity of review topics and the developer's decision to redirect the channel externally.

H_2: Reviews involving high financial sensitivity (transfers and cards) significantly raise the likelihood of external redirection compared with general inquiries and praise.

H_3: Technical and software failures significantly reduce the likelihood of external redirection compared with general inquiries, indicating a developer preference for keeping issues contained within the app.

2. Method

2.1. Study Design and Research Setting

The study uses quantitative content analysis, converting unstructured text into categorical variables that support econometric modeling, as described by Krippendorff (2018) and Neuendorf (2017) to ensure objectivity and the ability to code texts in the same manner. These three steps outlined in Sections 2.2 and 2.3 (precise definition of unit of analysis, here, each answered review as an independent unit, construction of a clear coding guide, and verification of interrater reliability prior to accepting results) were observed in both references. The study was implemented in the ZainCash wallet application in the Google Play Store.

Since 2016, ZainCash has been the top non-bank e-wallet in Iraq as it is licensed by the Central Bank of Iraq (ZainCash, n.d.) and it was ranked among the top 50 fintech companies in the Middle East by Forbes Middle East (2025). It is used by more than 1 million users via more than 10,000 cash agents, providing a realistic setting ideal for studying the influence of interactions between service-recovery and channel deflection. However, a single case design, methodologically appropriate due to the richness of data and the representativeness of the sector, is not without its limitations in generalizability to the wider population.

2.2. Sample and Extraction Procedure

This study used the in-depth single-case study method for Zain Cash with the context of Iraq. The choice of this platform is based on the documented evidence from the financial-stability reports and the latest market studies, as these reports show that the Iraqi e-wallet payment market is dominated by ZainCash, reaching 98.8% of the total value of transfers in the market (Alduhaidahawi et al., 2023; Hussein et al., 2026) and the operational practices are representative of the fintech market in Iraq in general.

It was decided to extract data in a closed, independent 12-month calendar period, from 1st September 2025 to 1st September 2026, to provide strong data consistency, reduce seasonal distortions and to enable an analysis of developer recovery behaviour over a length of time that had passed during the operational cycle since adoption. All the public user reviews that were published during the timeframe under study (N = 619) were retrieved via a systematic, automated mining procedure of the official Google Play Store repository. Of these, 464 received a formal, documented response from the application developer, for a 74.96% overall rate of response. The remaining 155 reviews (25.04%) were left unanswered and systematically excluded from the operational analysis because non-response reflects operational neglect or administrative delay rather than a deliberate communicative recovery strategy.3.3 Operationalization of Variables.

2.3. Operationalization and Coding of Variables

2.3.1. Dependent Variable: Service offloading

The responses of the developers were entered into a binary dependent variable scheme based on Hassan et al. (2018) and the dimensions of the service quality evaluation by Palamidovska Sterjadovska et al. (2025):

1 = Service offloading (high operational strain): redirection out of the storefront including direct referrals to support channels (n=88, 18.97%) and apologies with external referrals (n=88, 18.97%). Total deflection cases = 176 (37.93%).

0 = In-App Containment (low operational strain): direct solutions/actionable steps (n=232, 50.00%), immediate clarification/information (n=44, 9.48%), app-update/cache-clear requests (n=12, 2.59%). Total containment cases = 288 (62.07%).

2.3.2. Independent Variable: Issue Topic and Financial Sensitivity

The topics were grouped according to the mobile-banking service frameworks (Çallı, 2023; Grljević et al., 2025) into sensitivity-reflecting categories: direct monetary/financial transactions (transfers, card services, cash-out/agent fees), account and login problems, technical/software failures, and general inquiries and positive comments (n=331).

The classification instrument was found to have high reliability for both the dependent deflection variable (Cohen's kappa = 0.81, Landis and Koch, 1977) and independent sensitivity variable (Cohen's kappa = 0.85).

2.3.3. Quality-Control and Research-Ethics Procedures

A number of ethical issues with respect to user privacy and data confidentiality were encountered. The public data of app-store reviews were collected, however, any personal information in the review text (names, phone numbers, account numbers) were anonymized or redacted as recommended in digital content-analysis literature (Krippendorff, 2018). It was limited to review and reply text and did not attempt to create any links that would connect the user to external data, and was de-identified at the time of collection, processing and storage.

The coding of the expanded sample was done by a staged procedure: 1) an assisted first-pass coding using an automated tool based on keywords, which was implemented, to speed up initial processing; 2) a comprehensive manual coding by the researcher, which corrected and aligned the automated output with the coding guide for the procedure described in Sections 2.3.1-2.3.2; and 3) a final coding reliability assessment with an independent second rater on a random 15% sample, resulting in a Cohen's kappa = 0.81 "almost perfect agreement" per Landis and Koch (1977). The preliminary automated classification is therefore not reported in any of the results presented in Sections 3.1 and 3.2, but rather the final human-verified classification.

2.4. Statistical Treatment

Throughout, IBM SPSS Statistics was used. Descriptive distributions were calculated and the sensitivity deflection association was tested using the non-parametric chi-square test of independence and Cohen's (1988) effect size Cramer's V.

A binary logistic regression model was estimated to predict the probability of deflection, as described by Hosmer and colleagues (2013), using the outcome variables (1=yes, 0=no) of external deflection and the following review topics as categorical predictors for external deflection, compared to the outcome of "general inquiries and praise". Model fit was evaluated using the likelihood-ratio test (LLR χ^2) and McFadden's R^2 at the 0.05 level. Multicollinearity diagnostics confirmed acceptable independence among predictors; Variance Inflation Factor (VIF) values ranged from 1.020 to 1.023, well below the conservative threshold of 2.5.

Note that the chi-square test (Table 2) applies to a three-category structure in which the "general inquiries" and "technical failures" categories are combined into one to meet Cochran's

requirement for no cell's expected count to be less than 5 in moderate sample sizes. The logistic regression model (Table 3), on the other hand, maintains the four-category structure because logistic regression is not constrained by the minimum-cell-count criterion; H3's technical-failure category can therefore be tested as an independent predictor of distinct theoretical interest, separate from the conceptually different general-inquiries category (the former representing an actual failure without financial impact; the latter representing no failure whatsoever). Every format is therefore used for a different analytical purpose, even if it is based on the same data.

3. Results and Discussion

3.1. Results

3.1.1. Operational Distribution: Containment vs. Deflection

Table 1 presents the procedural breakdown of developer responses across the new set of 464 answered reviews gathered throughout the full calendar year (1 September 2025 – 1 September 2026).

Table 1. Operational Profile of In-App Containment and Channel Deflection in Developer Replies (n=464)

Resolution Category	Actual Reply Strategy	n	%	Effect on Customer Effort
In-App Containment (0)	Direct solution / actionable steps	232	50.00%	Low strain; immediate fix
	Immediate clarification/information	44	9.48%	Low strain
	App-update / cache-clear request	12	2.59%	Minor procedural strain
Service offloading (1)	Direct referral to support channels	88	18.97%	High strain; forces call/message
	Apology paired with external referral	88	18.97%	High strain; emotional soothing with channel switch
Total		464	100.0%	

Note. N=619 (total reviews in the period); n=464 (answered reviews; 74.96% response rate)

Of the issues reported directly within the app, 62.07% (n=288) were resolved by developers; more than one third of reviewers, 37.93% (n=176), had their issues deflected to external resources, meeting RQ1.

3.1.2. Testing H1: Financial Sensitivity and Channel Deflection

H1 was evaluated using a chi-square test of independence and cross-tabulation in Table 2, based on transaction-sensitivity levels.

Table 2. Cross-Tabulation and Chi-Square Test of Financial Sensitivity and Channel-Deflection Behavior (n=464)

Transaction Sensitivity Level	In-App n (%)	Deflected n (%)	Total (n)
Direct monetary transactions (transfers, cards, fees)	33 (49.3%)	34 (50.7%)	67
Account and login issues	17 (54.8%)	14 (45.2%)	31
General inquiries and software failures	238 (65.0%)	128 (35.0%)	366
Total	288 (62.1%)	176 (37.9%)	464

Note. $\chi^2(2, N=464)=6.723$, p=.035*, Cramer's V=0.120. *p<.05.

The results establish a statistically significant relationship between transaction sensitivity and deflection behavior ($\chi^2(2)=6.723$, p=.035, Cramer's V=0.120). Direct monetary transactions exhibited the highest deflection rate (50.7%), followed by account issues (45.2%), while general/software issues fell to 35.0%—thereby supporting H1, albeit with a small-to-moderate effect size according to Cohen (1988).

3.1.3. Predictive Modeling of Channel Deflection (H2 and H3)

A binary logistic regression model estimated deflection odds from operational-issue categories in Table 3.

Table 3. Binary Logistic Regression Predicting Service offloading (1=deflected, 0=in-app)

Issue Category	B	SE	Wald	p	OR	95% CI	H
Card services	1.011	0.352	8.244	.004**	2.748	[1.378, 5.478]	H2 ✓
Technical failures / app crashes	1.144	0.364	9.856	.002**	3.140	[1.537, 6.415]	H3 ✗
Account and authentication issues	0.545	0.380	2.059	.151	1.724	[0.819, 3.629]	— ✗
Money transfers and remittances	0.471	0.387	1.481	.224	1.601	[0.750, 3.416]	H2 (~) ✗

Note. DV: service offloading (1=yes, 0=no). Reference category = general inquiries and praise (n=331). Fit: LLR $\chi^2(4)=17.873$, p=.001; McFadden's $R^2=0.0290$. *p<.05, **p<.01.

The model was significant overall (LLR $\chi^2(4)=17.873$, p=.001), explaining McFadden's $R^2=0.0290$ of variance. The Hosmer–Lemeshow goodness-of-fit test showed acceptable calibration against the observed data ($\chi^2= 0.000$, df = 3, p = 1.000), producing an overall classification accuracy of 64.66%.

3.1.4. Support for H2

Complaints about card services significantly increased deflection odds by a factor of 2.748 compared with the reference category (B=1.011, Wald=8.244, p=.004, 95% CI [1.378, 5.478]), providing partial support for H2 specifically for card services. By contrast, money transfers were not statistically significant in the multivariate model (OR=1.601, p=.224), even though the broader monetary-transaction category remained significant in the chi-square test (Section 3.1.2, p=.035). This inconsistency indicates that predictive strength differs by transaction type within the same sensitivity tier, with card services appearing more sensitive to security and regulation than general cash transfers in the platform's particular context. Consequently, H2 is only partially supported rather than fully supported.

3.1.5. Evaluation of H3

However, contrary to the classic assumption that problems would be within the app, those related to technical failure or crashes showed a positive and significant B value (B=1.144, Wald=9.856, p=.002, OR=3.140, 95% CI [1.537, 6.415]). This meant that the odds of deflection increased by three times for technical failures as compared to a general inquiry, with this factor being the strongest predictor in the model. Does not support the hypothesized direction: H3: Predicted reduced deflection odds for 100mph Accessories. However, the result indicates that the same happens when software fails persistently, causing developers to refer customers to external technical support, which is in line with the updated theoretical explanation in Section 1.2, which draws on Media Synchronicity Theory (Dennis et al., 2008) and current app-review engineering frameworks (Gao et al., 2018).

3.2. Discussion

The empirical results show the operational architecture of service-recovery decisions of digital-wallet developers.

First, financial Sensitivity and Cards as Drivers of Deflection: The findings of the chi-square test supported the results, showing a significant relationship between financial sensitivity and deflection ($\chi^2=6.723$, p=.035, V=0.120). Card-service complaints were a significant predictor according to the multivariate logistic model, with deflection odds increasing by almost 2.748 times from the reference (OR=2.748, p=.004, 95% CI [1.378, 5.478]). The multivariate logistic model showed that card-service complaints were significant, Unlike local wallet transfers settled internally, payment cards are subject to international network regulations (for example, Visa and Mastercard) and stringent fraud-prevention protocols that mandate an immediate token freeze and off-channel verification, which cannot be implemented openly through app stores. This is consistent with MRT logic and security/privacy restrictions in Digital Banking (Palamidovska-Sterjadovska et al., 2025): public reviews are an open environment that is not secured by encryption and two-factor verification. Card issues concerning sensitive banking accounts and tokens drive developers to deflection as per Kauschinger et al. (2023) on cautious knowledge-boundary managing and with Alsamman et al. (2023) and Alduhaidahawi et al. (2023) on security-risk sensitivity and the requirement for trust-building in the banking environment in Iraq.

Second, operational Strain and the Transfer of Recovery Costs to the Consumer. This is the second instance of Operational Strain and the Transfer of Recovery Costs to the Consumer. Channel

deflection creates compounded. When a customer is forced redirected to a phone line (6698) or WhatsApp link, the consumer is required to search for a contact, re-enter data, and re-narrate the complaint to another support agent, which represents what Voorhees et al. (2017) call “customer-journey disconnect.” When users have to make extra efforts to fix a platform error, trust is lost and perceived procedural and distributive injustice results (Luk et al., 2018; Kenesei & Bali, 2020; Tax et al., 1998). It indicates another kind of "operational-strain paradox": the firm makes it easier for them to comply with regulations, but makes it more difficult for the customer to use the wallet, making them more likely to return to cash, which is counter to the financial-inclusion objectives promoted by Al-Jubouri and Kadhim (2026) and Hassan (2026).

Third, fundamental Shift in Explaining Intractable Software Failures (H_3). In contrast to the classical theoretical prediction of in-app containment, the new annual sample (n = 464) found that the strongest predictor of external deflection overall was technical failures and app crashes with odds 3.140 times higher (B = 1.144, Wald=9.856, p = .002, OR = 3.140). In the hypothesized direction, H3 was not supported, and instead received a significant positive odds ratio. The explanation for this reversal is strong in Media Synchronicity Theory (Dennis et al., 2008) and contemporary software-engineering research (Gao et al., 2018): with acute software failures (Sudden crashes, authentication failures), simple guidance is not sufficient and requires high-capacity synchronous technical communication (exchange screenshots, check version of software/OS) which the public review interface can't provide, forcing developers to create real-time interactive channels.

Fourth, model Explanatory Power and Practical Outlook, Overall LLR significance ($\chi^2(4)$ = 17.873, p = .001) shows that the two variables in the model (issue topic, LLR) are statistically significant but only explain a small amount of the variance in the developer's decision; other variables that were not measured in the store reviews are likely to account for the rest of the variance. Such findings present practical implications for fintech companies, such as implementing the suggestions of Al-Assaf and Abulaila (2025) and Palamidovska-Sterjadovska et al. (2025) to speed up the response time, tailor the responses, and integrate encrypted in-app deep links to guide the complaint process and to gather technical error reports without the need to divert customers away from their platforms.

3.2.1. Originality and Contribution

This study is a deviation from previous studies in three ways. First, unlike studies that categorize developer replies as a general result (reply/no-reply, positive/negative), this study focuses specifically on service offloading as a direct measure of customer operational strain, and hence can be directly applied to operations managers as an operational outcome rather than merely measuring the presence of a reply.

Second, the study offers a relatively uncommon quantitative empirical test of the complaint financial sensitivity-channel-deflection relationship in a real applied context (ZainCash), as opposed to a simulated experimental or survey-based context with theoretical abstractions, which reflects the action of the developers in the field, not what the study chose to postulate about them.

Third, the study brings together two theoretical models that have been traditionally developed in different streams of literature: Media Richness Theory (MRT) covers the reasons for deflections from the developer's perspective, and the effort framework covers the cost incurred by the customer as a result of the deflections from the developer's perspective, which together completes the operational equation from both sides: developer and customer, covering the deflection paradox.

3.2.2. Implications for App-Store Interface Design

The results are also of interest to the intermediary design of app stores. From a practical perspective, there is no structural system in existence to help users distinguish between a complaint that calls for general guidance and a complaint that calls for a secure external deflection, which is left entirely to the developer's discretion in the free text reply on the stores, like Google Play and Apple App Store. This presents a design opportunity for store operators themselves (Google and Apple): structured response fields that allow developers to formally categorize a response as "direct solution" or "secure channel deflection" and include an embedded, encrypted

link, thereby lessening the need for free-text phrasing and making cross-app response quality more measurable. In line with customer experience touchpoint optimization (Patti et al., 2020), which highlights the importance of integrated digital interfaces in enabling immediate operational recovery.

3.2.3. Comparison with Mobile-Banking and Fintech Literature

This study's results are directionally consistent with the literature on app review analysis in banking and finance in the realm of perceived service quality (PSQ), as seen in Çallı's (2023) study of mobile-banking complaint topics, which used topic modeling to identify the topics and associated factors in the reviews. The findings of this study and Çallı's (2023) showed that the perceived quality of the service of a mobile banking app is an interconnected concept that exceeds the technical performance of the app itself, including the quality of the support team's interaction with the user and the speed of resolving a complaint specifically, and that even though a complaint topic is not necessarily financial, it does make a significant difference in the approach used to dealing with a complaint. The results of the financial-sensitivity categories presented in this study are supported by the analysis of different user-experience patterns found in a single app by Grljević et al. (2025) between different functional categories within the same app (financial vs. browsing/inquiry).

From a software-engineering perspective, Hassan et al. (2018) noted that this discussion pattern between free-app users and developers on Google Play is significantly related to rating changes, but were unable to differentiate the replies that actually address the issue within the app itself from those deflecting it to other apps, which is what this study helps to address by separating external deflection as a separate outcome variable. In a similar way, Albesher (2023) compared the Saudi banking app with the U.S. banking app and looked at the general type of reply (personalized vs. automated reply) but not at the place of the customer's deflection. This study looks at it in more granular terms, through a finer operational analysis.

4. Conclusions

In this study, the determinants of channel-deflection behaviour in mobile wallets are examined, revealing that developer responses are influenced by an operational sorting process shaped by both monetary sensitivity and complexity of diagnostic tasks: Structural split in service recovery: a significant percentage (37.93%) of answered reviews end with a service offloading outside of the store, indicating that app stores are not the end of the line for a large number of cases. Card services as a critical financial driver: card-service complaints are associated with a little below 2.75 times higher odds of deflection, making this the most salient individual predictor of deflections when considering financial-transactions categories; however, not all financial-transaction categories are equally effective individual predictors, as general cash transfers do not achieve significance in the multivariate model even though it was significant in the chi-square test. Intractable technical failures as a primary deflection driver: contrary to the classical containment assumption, software failures increase off-store referral odds by more than 3.14-fold, potentially because resolving advanced software problems requires exchanging screenshots and checking device and operating-system data communicative capabilities that the general text-review format cannot provide. The operational-strain paradox: although deflection helps protect data privacy and financial compliance, and is may be necessary for complex failures. In light of this, fintech officials and operations managers are recommended to: Securely pre-load an in-app support ticket containing transaction data within the reply text, rather than require the customer to repeat explanations to a toll-free number and provide deep links to the in-app support ticket via secure, authenticated deep link. Technical failures emerged as the strongest deflection driver (OR=3.140), so make it easy for users to tap a button in-app to submit a technical error report (including a screenshot and device/OS details), rather than forcing them to call external support to verbally describe a fault that may not be easy to describe. Use deflection-reply language that is customized, not boilerplate: Engage in a brief, specific discussion of the complaint before redirecting the user to another location, thus reducing the coldness of the formal reply. To enhance training for support staff on “justified deflection”, a silent act of redirection is communicated as an act of communication that explains why the request cannot be met within the store (data protection, diagnostic complexity). The present study has several limitations that also provide directions for future research: Single case design: findings based on one application and one developer in one

geographic market (Iraq) and the observed statical association not be directly translated to the wider fintech sector without being replicated on other platforms and developers. Small subcategory sizes: some subcategory contained small number of observations, which necessitated merging them into larger sensitivity tiers for the chi-square test. No operational-strain measurement: data from the archival store were used to model developer decisions, and the operational strain and customer efforts CES were discussed as theoretical implications rather than directly measured outcome's. Future work should include a survey to measure the real CES of deflected customers compared to in-app resolved customers.

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