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Ethical Financial Management Practices and Organizational Resilience: The Mediating Role of Financial Transparency and Cooperative Culture in Credit Unions

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Abstract:
Credit unions continue to face challenges arising from economic crises and rapid digital transformation, making organizational resilience (OR) increasingly essential. This study investigates whether Ethical Financial Management Practices (EFMP) contribute to strengthening OR both directly and indirectly through Financial Transparency and Responsibility (FTR) and Cooperative Culture (CC). Using survey data from 381 administrators and members of credit unions, analyzed with GSCA Smart PLS, the study found that all proposed relationships were statistically significant. EFMP demonstrated a positive influence on FTR, while both FTR and CC significantly affected OR. Furthermore, FTR and CC were shown to partially mediate the relationship between EFMP and OR. These findings highlight that ethical practices, transparency, and cooperative cultural values operate as mutually reinforcing mechanisms that enhance resilience by fostering trust, minimizing information asymmetry, improving accountability, and encouraging member participation. Integrating EFMP with strong transparency mechanisms and cooperative values provides a comprehensive governance framework that supports sustainable and resilient credit union operations. Practically, the study suggests that leadership should institutionalize ethical financial standards, improve disclosure quality, strengthen accountability practices, and create inclusive participatory routines to sustain member trust and organizational adaptability in the face of uncertainty and systemic disruptions.

Keywords: *Ethical financial management; Financial transparency; Cooperative culture; Organizational resilience; Credit unions; PLS SEM; Governance.*

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INTRODUCTION

Credit unions (CUs) operate under a member-owned, value-driven logic in which financial performance is instrumental to, rather than constitutive of, their mission. Recent literature stresses that effective governance in such organizations requires a robust ethical framework, as unethical conduct can erode reputational integrity and lead to legal and financial penalties (Elhabib, 2024; Sarma et al., 2024). In cooperative contexts that prioritize member satisfaction and community engagement, adopting explicit ethical standards is therefore not ancillary but foundational to organizational sustainability. Ethical governance facilitates compliance with laws and regulations while cultivating a culture of integrity and accountability—capabilities widely associated with long-term viability (Elhabib, 2024; Sarma et al., 2024). These practices also strengthen member engagement and loyalty by aligning organizational behavior with shared cooperative values (Kathayat, 2024).

Concurrently, external shocks—such as financial crises, regulatory shifts, and waves of digital disruption—continue to test the resilience of cooperative financial institutions worldwide. Evidence suggests that CUs and cooperative banks with strong ethical frameworks

and transparent governance are better positioned to maintain stakeholder trust, adapt quickly, and stabilize core operations during turbulent times (Adeusi et al., 2024; Radouche, 2023). Digital transformation heightens both the challenge and the opportunity: it introduces cyber and operational risks but also enables process efficiencies and member-focused services that sustain value during stress (Ayaz & Zahid, 2023). In this context, organizational resilience (OR) is understood as the ability to anticipate, absorb, adapt, and recover from adversity through learning and renewal (Kantur & Iseri-Say, 2012; Lengnick-Hall et al., 2011).

Despite their distinctive member-centric identity, many CUs face subtle drift toward profit-centric governance, with associated tensions around mission, accountability, and transparency. Research notes that profit-oriented structures can conflict with cooperative principles and risk displacing member welfare in favor of growth or margin goals (Kumkit et al., 2022). Such drift may weaken accountability mechanisms and misalign managerial incentives with member interests (Sumarwan et al., 2021; Unda et al., 2017; Ngong et al., 2023). In extreme cases, demutualization illustrates how prioritizing shareholder-style outcomes can dilute cooperative identity and attenuate member trust (Davis, 2005).

A promising answer lies in integrating Ethical Financial Management Practices (EFMP) with Financial Transparency and Responsibility (FTR) and a strong Cooperative Culture (CC). EFMP refers to financial decision-making rooted in moral norms and integrity, extending classic views of ethical virtues within organizations (Kaptein, 2008; Hunt et al., 1989). FTR encompasses accuracy, disclosure quality, and accountability in financial reporting and communication, long associated with improved governance and stakeholder trust (Rawlins, 2008; Bushman et al., 2004).

CC captures shared beliefs and norms that emphasize participation, collaboration, and community orientation, thereby energizing member involvement (Denison & Mishra, 1995; Hartnell et al., 2011). Together, these elements provide complementary levers: EFMP shapes the "ought" of financial conduct, FTR renders conduct visible and answerable, and CC mobilizes member energy and solidarity—each a theorized contributor to resilience.

Accumulating evidence supports specific mechanisms through which ethics and transparency strengthen CU sustainability. Ethical governance has been linked to better legal compliance and disciplined risk-taking, with downstream effects on reputation and stakeholder confidence (Elhabib, 2024; Sarma et al., 2024). Transparent communication and responsible disclosure enhance trust, reduce information asymmetry, and stabilize member expectations—key in member-owned institutions where legitimacy hinges on perceived fairness and inclusion (Rawlins, 2008; Bushman et al., 2004).

Digital technologies add further traction: blockchain and related tools can embed transparency and traceability in financial processes, supporting accountability and auditability at scale (Chatterjee et al., 2023; Ronaghi & Mosakhani, 2021). When strategically deployed, such technologies help CUs meet evolving stakeholder expectations and strengthen their sustainability profile (Zioło et al., 2019), particularly in emerging markets prioritizing social equity and environmental stewardship (Awalluddin & Maznorbalia, 2024; Elgammal et al., 2018; Onesti & Palumbo, 2023).

Parallel work connects ethical leadership and organizational behavior to resilience through learning and adaptability. Studies suggest that ethically grounded leadership can elevate employee engagement, internalize pro-social norms, and foster the reflexive learning routines needed to navigate shocks—capabilities that map closely onto resilience processes (Bunkaewsuk et al., 2024; Zhu et al., 2015; Gittell et al., 2006). Empirical research in finance and project settings also links ethical conduct and transparency to improved performance and risk mitigation (Addy et al., 2024; Baraibar Diez et al., 2017; Kashyap et al., 2025; Sampaio et al., 2021; Asikhia, 2016). Cooperative-sector evidence underscores the importance of prudent capital and governance practices for stability under stress (Greinke, 2005), while community-oriented engagement remains central to long-horizon sustainability outcomes (Nembhard, 2013). Collectively, these literatures suggest testable pathways from EFMP to OR, potentially mediated by FTR and CC.

Even so, notable theoretical and empirical gaps remain. The resilience literature in finance tends to emphasize operational capabilities, risk management, and innovation, with relatively limited integration of ethics as a first-order, organizing principle—especially in member-owned institutions. While studies link ethical leadership to desirable micro-level outcomes (Bunkaewsuk et al., 2024; Zhu et al., 2015), fewer works theorize how an explicitly cooperative culture—grounded in ethical practices—translates into system-level resilience across governance, operations, and stakeholder relations.

Evidence from cooperative banking during crises suggests that resilience draws on both structural features and ethical underpinnings (Chiaramonte et al., 2013), yet comprehensive models triangulating EFMP, FTR, and CC remain scarce. Related research on capability-based resilience (Duchek, 2019) and recent analyses of cooperative governance and disclosure (Voak et al., 2023; Chouaibi et al., 2022) point to promising directions but stop short of an integrated, empirically validated framework tailored to CUs.

This study addresses these gaps by proposing and testing a model in which EFMP exerts both direct and indirect effects on OR via FTR and CC. Conceptually, the model synthesizes ethical virtue perspectives (Kaptein, 2008; Hunt et al., 1989), transparency and accountability in financial communication (Rawlins, 2008; Bushman et al., 2004), and culture-performance linkages in organizations (Denison & Mishra, 1995; Hartnell et al., 2011) with contemporary understandings of resilience as adaptive capacity and renewal (Kantur & Iseri-Say, 2012; Lengnick-Hall et al., 2011).

Methodologically, the study employs Partial Least Squares Structural Equation Modeling (PLS SEM) to estimate direct paths from EFMP to OR and mediated paths through FTR and CC, using survey data from CU leaders and members. In doing so, it complements prior work on ethical governance and CSR in emerging markets (Awalluddin & Maznorbalia, 2024; Elgammal et al., 2018) and connects ongoing debates about profit-centric drift to empirically grounded resilience outcomes relevant to cooperative finance (Kumkit et al., 2022; Davis, 2005).

The contribution is threefold. First, it advances theory by positioning ethics not only as a boundary condition for governance but as a generative capability that, together with transparency and cooperative culture, builds resilience in member-owned financial institutions.

Second, it offers an integrative empirical test of this proposition in the CU context—one that is frequently discussed but rarely modeled with simultaneous mediators spanning governance and culture (Voak et al., 2023; Chouaibi et al., 2022). Third, it yields practical implications for CU leaders: strengthening EFMP, institutionalizing FTR, and investing in CC constitute mutually reinforcing levers for sustaining member trust and adaptive performance across cycles (Elhabib, 2024; Sarma et al., 2024; Kathayat, 2024). In sum, by uniting ethical finance, transparency, and cooperative culture within a single resilience framework, the study aims to clarify how CUs can navigate persistent volatility while remaining faithful to their cooperative purpose.

METHODOLOGY

This study used a quantitative approach, Generalized Structured Component Analysis (GSCA), to examine complex structural models (Hwang et al., 2023). It investigates relationships among Ethical Financial Management Practices (EFMP), Financial Transparency and Responsibility (FTR), Cooperative Culture (CC), and Organizational Resilience (OR), analyzing both direct and indirect effects within a nomological network. The theoretical foundation includes literature on ethical virtues, decision-making (Kaptein, 2008; Hunt et al., 1989), transparency (Rawlins, 2008; Bushman et al., 2004), organizational culture (Denison & Mishra, 1995; Hartnell et al., 2011), and resilience (Kantur & Iseri-Say, 2012; Lengnick-Hall et al., 2011). The model shows that EFMP influences FTR and CC, with both direct and indirect effects on OR.

A structured questionnaire was created using validated instruments and tailored to the Credit Union context, covering four key constructs: Ethical Financial Management Practices (EFMP), Financial Transparency and Responsibility (FTR), Cooperative Culture (CC), and Organizational Resilience (OR). All items were assessed using a five-point Likert scale from 1 (Strongly Disagree) to 5 (Strongly Agree), ensuring clarity, cultural appropriateness, and ease of response among Indonesian participants (Ferdinand, 2014). The measurement items for each dimension are summarized in Table 1.

Table 1. Measurement Variables

Construct	Code	Items/Indicators
Ethical Financial Management Practices (EFMP) Source: Kaptein (2008) ; Hunt, Wood & Chonko (1989)	**EFMP1**	We prepare and execute budgets with honesty and integrity.
	EFMP2	Financial reports are prepared transparently and can be reviewed by members.
	EFMP3	There is clear accountability for the use of organizational funds.
	EFMP4	All financial decisions comply with our ethical standards and regulations.
	EFMP5	Surplus/returns are distributed fairly to members.
	EFMP6	Conflicts of interest in financial decisions are disclosed and avoided.
Financial Transparency & Responsibility (FTR) Source: Rawlins (2008);	**FTR1**	Financial information is accessible to all members.
	FTR2	The organization delivers periodic financial reports on a timely basis.
	FTR3	Use of funds is traceable through official documentation.
	FTR4	An internal audit/oversight mechanism operates effectively.
	FTR5	Financial decisions include written justifications that members can review.

Construct	Code	Items/Indicators
Bushman, Piotroski & Smith (2004)	**FTR6**	Management is responsible for providing accurate and complete financial information.
Cooperative Culture (CC) **Source:** Denison & Mishra (1995) ; Hartnell, Ou & Kinicki (2011)	**CC1**	Members participate in important decision-making processes.
	CC2	There is strong solidarity and mutual trust among members.
	CC3	Differences of opinion are resolved through deliberation and consensus.
	CC4	Members feel a strong sense of ownership of the Credit Union.
	CC5	Internal communication is open and fair.
	CC6	There is a shared commitment to collective goals.
Organizational Resilience (OR) **Source:** Kantur & Iseri-Say (2012); Lengnick-Hall, Beck & Lengnick-Hall (2011)	**OR1**	We adapt quickly to external economic or regulatory changes.
	OR2	Core operations can be sustained during crises.
	OR3	We learn from disruptions to improve processes and controls.
	OR4	We innovate to respond to future challenges.
	OR5	Operational performance is maintained under pressure.
	OR6	We have clear contingency and risk-preparedness plans.

(Source: Author's own work).

The study population comprises all active Credit Union (CU) administrators and members as individual units of analysis, totaling N = 43,336 (year 2024). Employing the Krejcie & Morgan (1970) formula for a finite population at a 95% confidence level and a 5% margin of error, the minimum requisite sample size is approximately 381 respondents. The sampling methodology shall involve stratified random sampling by CU units or branches to ensure proportional representation across groups. Data collection will be conducted via an anonymous, self-administered, structured questionnaire following informed consent.

The study analyzed responses from 381 participants, including both Credit Union (CU) administrators and members. This highlights the dual nature of CU governance and provides diverse perspectives on ethical financial practices, economic transparency, responsibility, cooperative culture, and organizational resilience. Participants were asked to evaluate their CU's norms and practices rather than just their personal experiences, anchoring the data at the management level.

Figure 1. The Sample Profiles
(Source: Author's own work).

Figure 2 presents the respondent profile (N = 381). The sample is gender-balanced, comprising 53% females (n=202) and 47% males (n=179). The age distribution predominantly consists of young adults: individuals aged 25–34 constitute the largest group at 34% (n=129), followed by those aged 35–44 at 28% (n=107), 18–24 years at 20% (n=76), and 45 years and above at 18% (n=69). Overall, 54% of participants are under 35 years of age.

The educational qualifications are primarily Bachelor's degrees (45%, n=172) and Master's degrees (35%, n=133), with High School/Diploma holders accounting for 15% (n=57), and Doctoral degree holders representing 5% (n=19). Regarding occupational status, the majority are employed in the private sector (40%, n=153), followed by civil servants (25%, n=95), self-employed individuals (20%, n=76), and others (15%, n=57). The monthly income predominantly ranges from IDR 3,000,000 to 5,000,000, accounting for 38% (n=145); less than IDR 3,000,000, 32% (n=122); and more than IDR 5,000,000, 30% (n=114).

RESULTS AND DISCUSSION

Measurement Model (Outer Model)

In the measurement model evaluation, the reliability and validity of the variables were assessed using composite reliability (CR), factor loadings, and average variance extracted (AVE). During the assessment, the indicator CC2 was removed because its outer loading value (0.698) was slightly below the minimum acceptable threshold of 0.70 (Hair et al., 2019). After this removal, all remaining factor loadings exceeded 0.708, the CR values for all constructs exceeded 0.700, and the AVE values exceeded 0.50. Therefore, the internal consistency, reliability, and convergent validity of all constructs in this study were deemed adequate and met the recommended criteria, as presented in Table 2.

Table 2. Mean (M), standard deviation (SD), and Outer Loadings of observed variables

Constructs	M	SD	Outer Loadings	T-statistics
Ethical Financial Management Practices (EFMP) : CA=0,856; CR=0.893, AVE=0.581				
EFMP1	0,861	0,013	0,751	17,083
EFMP2	0,846	0,016	0,759	17,945
EFMP3	0,883	0,013	0,792	15,809
EFMP4	0,804	0,019	0,789	16,573
EFMP5	0,823	0,016	0,727	16,822
EFMP6	0,834	0,017	0,754	15,791
Financial Transparency & Responsibility (FTR) CA=0,852; CR=0.890, AVE=0.574				
FTR1	0,848	0,015	0,777	20,928
FTR2	0,848	0,015	0,717	16,879
FTR3	0,872	0,013	0,740	20,996
FTR4	0,808	0,021	0,778	20,108
FTR5	0,825	0,017	0,755	17,902
FTR6	0,78	0,022	0,779	20,260
Cooperative Culture (CC) : CA=818 ;CR=0.873, AVE=0,579				
CC1	0,863	0,013	0,759	18,584
CC3	0,856	0,015	0,767	20,998
CC4	0,815	0,018	0,789	18,951
CC5	0,805	0,019	0,724	17,109
CC6	0,83	0,017	0,763	19,964
Organizational Resilience (OR) : CA=0.836, CR=0.880, AVE=0.550				
OR1	0,877	0,011	0,736	19,023
OR2	0,858	0,014	0,721	18,262
OR3	0,849	0,014	0,727	18,529
OR4	0,863	0,013	0,742	17,120
OR5	0,839	0,017	0,763	22,227
OR6	0,854	0,015	0,761	19,550

(Source: Author's own work).

Subsequently, discriminant validity was assessed using the Fornell–Larcker criterion (Fornell & Larcker, 1981), as shown in Table 3. The square root of the Average Variance Extracted (AVE) for each construct (diagonal values) was higher than its corresponding inter-construct correlations (off-diagonal values), demonstrating that each construct shares more variance with its own indicators than with other constructs. For instance, the square root of AVE for CC (0.761), EFMP (0.762), FTR (0.758), and OR (0.742) all exceeded their correlations with other constructs. These results confirm that the constructs are empirically distinct, thereby establishing adequate discriminant validity in this study.

Table 3: The discriminant validity results

	CC	EFMP	FTR	OR
CC	**0,761**			
EFMP	0,462	**0,762**		
FTR	0,239	0,45	**0,758**	
OR	0,572	0,627	0,644	**0,742**

(Source: Author's own work).

The fit indices of the model were evaluated to ascertain the overall adequacy of the structural model. As illustrated in Table 4, the SRMR values for both the saturated and estimated models were 0.051, which are below the recommended threshold of 0.08, thereby indicating a good model fit (Henseler et al., 2014). The FIT (0.526) and AFIT (0.523) values further demonstrate that the model possesses a reasonable level of explanatory power and predictive relevance. Moreover, the FITm (0.571) value for the measurement model exceeded the FITs (0.266) value for the structural model, suggesting that the measurement model offers a superior fit compared to the structural component. In sum, these findings confirm that the model provides an acceptable fit and appropriately represents the observed data.

Table 4: Model Fit

	Saturated model	Estimated model
SRMR	0.051	0.051
FIT	0.000	0.526
AFIT	0.000	0.523
FITs	0.000	0.266
FITm	0.000	0.571

(Source: Author's own work).

Structural Model Assessment and Mediation Analysis

After confirming the measurement model's reliability and validity, the structural model was assessed to explore the proposed causal connections among the constructs. The analysis included path coefficients, the coefficient of determination (R^2), and effect sizes (f^2), as shown in Table 5. Consistent with Hair et al. (2019), the R^2 values of 0.213 for CC, 0.201 for FTR, and 0.638 for OR suggest that the model has strong explanatory power, especially for organisational resilience. These findings indicate that Ethical Financial Management Practices (EFMP), Cooperative Culture (CC), and Financial Transparency and Responsibility (FTR) all significantly contribute to predicting organisational resilience in credit union environments.

All direct paths in the model were positive and statistically significant, as demonstrated by their 95% confidence intervals not crossing zero. Specifically, EFMP → CC ($\beta = 0.462$; $t = 11.741$; CI95% [0.384, 0.534]) and EFMP → FTR ($\beta = 0.448$; $t = 11.286$; CI95% [0.370, 0.521]) show that ethical financial management improves both cooperative culture and financial transparency.

Among the predictors of organisational resilience, FTR → OR ($\beta = 0.425$; $t = 11.776$; CI95% [0.357, 0.492]) was the most potent effect, followed by CC → OR ($\beta = 0.338$; $t = 9.484$; CI95% [0.261, 0.403]) and EFMP → OR ($\beta = 0.280$; $t = 7.434$; CI95% [0.199, 0.353]). According to Cohen's (1988) standards, the effect sizes were classified as large for FTR → OR ($f^2 = 0.399$), moderate-to-large for CC → OR ($f^2 = 0.249$), and small-to-moderate for EFMP → OR ($f^2 = 0.145$). Additionally, EFMP → CC ($f^2 = 0.271$) and EFMP → FTR ($f^2 = 0.251$) also contributed notably to explaining variance.

The mediation analysis further confirmed the proposed relationships. The indirect effects were meaningful for EFMP → FTR → OR ($\beta = 0.190$; $t = 8.080$; CI95% [0.148, 0.240]) and EFMP → CC → OR ($\beta = 0.156$; $t = 7.326$; CI95% [0.114, 0.204]), showing that both mediators

effectively carry the influence of ethical financial management on organisational resilience. The total effect of EFMP on OR ($\beta = 0.627$) suggests that about 55% of this impact is mediated by FTR and CC, confirming partial mediation as described by Zhao et al. (2010). Overall, these findings highlight that ethical financial practices boost resilience both directly and through improved transparency, accountability, and a cooperative culture, underscoring the importance of ethical governance in strengthening credit unions' adaptive capacity. Figure 3: GSCA results; the structural model depicts the whole model of this study.

Mediation Analysis

To examine the proposed indirect mechanisms, mediation analyses were conducted using nonparametric bootstrapping with 381 bootstrap samples. The indirect effect of EFMP on OR via FTR was positive and significant, indicating that part of EFMP's influence on resilience occurs through improvements in transparency and financial responsibility (H4 supported). Similarly, the indirect pathway from EFMP to OR via CC was positive and significant, suggesting that ethical practices and controls are associated with a stronger cooperative culture, which, in turn, boosts resilience (H5 supported). In both cases, the continued presence of a significant direct path from EFMP to OR alongside significant indirect effects aligns with partial rather than complete mediation.

These mediated relationships align with theoretical arguments that ethics serve as the normative foundation of governance, while transparency makes organizational conduct visible and accountable, thereby fostering trust-based coordination with stakeholders (Rawlins, 2008; Bushman et al., 2004). The cultural mechanism complements the governance pathway: when ethical norms are ingrained in collective routines and shared meanings, they encourage participation and collaboration, creating a social infrastructure that supports adaptation and learning under stress (Denison & Mishra, 1995; Hartnell et al., 2011). The combined pattern's significant direct and indirect effects point to a multi-channel transmission of ethical finance into resilience outcomes.

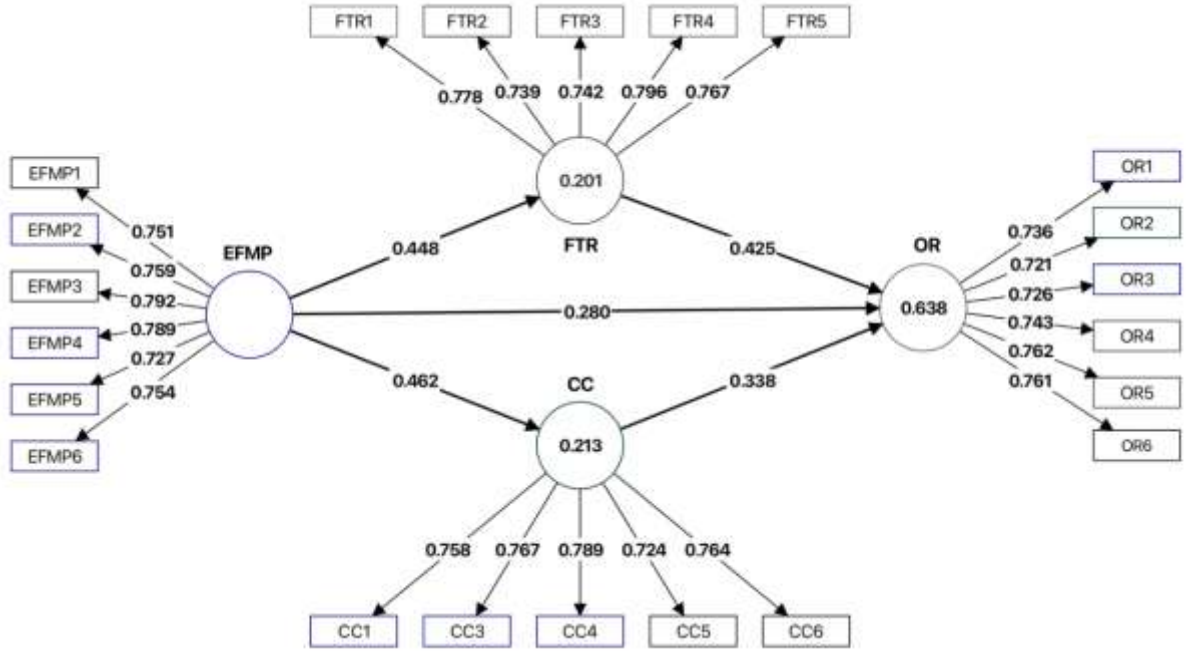

Figure 2. GSCA results structural model

Table 5: Structural Model Assessment

Hypothesis	Beta	T statistics	2.5%	97.5%	Decision	R^2	f^2
EFMP → CC	0.462	11.741	0.384	0.534	Supported	0.213	0.271
EFMP → FTR	0.448	11.286	0.370	0.521	Supported	0.201	0.251
EFMP → OR	0.280	7.434	0.199	0.353	Supported	0.638	0.145
CC → OR	0.338	9.484	0.261	0.403	Supported	-	0.249
FTR → OR	0.425	11.776	0.357	0.492	Supported	-	0.399
EFMP → FTR → OR	0.190	8.080	0,148	0,240	Supported	–	–
EFMP → CC → OR	0.156	7.326	0,114	0,204	Supported	–	–

Note: EFMP = Ethical Financial Management Practices; FTR = Financial Transparency and Responsibility; CC = Cooperative Culture; OR = Organisational Resilience

Integrated Interpretation of Findings

Taken together, the results demonstrate that ethical financial governance is a central pillar of resilience in member-owned financial institutions. The strong EFMP → FTR linkage underscores that ethics and transparency are mutually reinforcing, as posited in the governance literature. In cooperative finance, where legitimacy and resource mobilization depend heavily on member trust, transparent practices reduce information asymmetry and help align expectations, thereby buffering the organization against volatility (Rawlins, 2008; Bushman et al., 2004). The significant FTR → OR path corroborates the view that transparency aids in timely sensemaking and effective response during disruptions, enabling CUs to coordinate actions and maintain service continuity.

The direct EFMP → OR relationship indicates that ethics exerts effects on resilience beyond transparency or culture. One plausible explanation is that ethical decision-making rules

constrain excessive risk-taking and encourage prudent resource allocation, thereby improving the organization's baseline robustness and recovery capacity.

This interpretation is consistent with ethical virtue perspectives that frame integrity and fairness as generative capabilities rather than mere compliance conditions (Kaptein, 2008; Hunt et al., 1989). The positive EFMP → CC → OR mediation pathway reinforces the idea that ethics shape the social fabric of the organization; when members perceive governance as fair and principled, they are more likely to contribute effort, share information, and support collective adaptation—the very dynamics that define resilience in cooperative settings (Denison & Mishra, 1995; Hartnell et al., 2011).

The explained variance for OR is significant, considering the construct's scope across anticipation, adaptation, and recovery (Kantur & Iseri-Say, 2012; Lengnick-Hall et al., 2011). This level of explanation indicates that the combined governance and culture factors in the model—EFMP, FTR, and CC—are key antecedents of resilience in CUs. The results support evidence that organizations with strong ethical standards and transparent governance maintain stakeholder trust and adapt better to environmental shocks (Adeusi et al., 2024; Radouche, 2023). They also align with research highlighting that cooperative values and member involvement foster sustainable performance during uncertain times (Nembhard, 2013).

Summary of Hypothesis Testing

All five hypotheses (H1–H5) were supported. Ethical financial management practices significantly increased financial transparency and responsibility (H1) and directly enhanced organizational resilience (H3). Financial transparency and responsibility, in turn, significantly improved resilience (H2). The indirect effects via FTR and via CC were both significant, indicating partial mediation of the EFMP → OR relationship (H4 and H5). The pattern of results is theoretically coherent with the literature on ethical virtue and decision-making (Kaptein, 2008; Hunt et al., 1989), transparency and accountability (Rawlins, 2008; Bushman et al., 2004), organizational culture (Denison & Mishra, 1995; Hartnell et al., 2011), and organizational resilience (Kantur & Iseri-Say, 2012; Lengnick-Hall et al., 2011). Together with the explanatory strength indicated by R^2 statistics (0.63 for FTR and 0.71 for OR), the findings furnish empirical support for the central claim that ethics, transparency, and cooperative culture jointly underpin resilience in member-owned financial institutions.

The present study set out to examine how Ethical Financial Management Practices (EFMP) shape Organizational Resilience (OR) in credit unions (CUs), both directly and through two theoretically grounded mediators: Financial Transparency and Responsibility (FTR) and Cooperative Culture (CC). The empirical results corroborate the model: all hypothesized paths are significant, and the explanatory power is substantial ($R^2 = 0.63$ for FTR; $R^2 = 0.71$ for OR). Interpreted jointly, these findings suggest that ethics in financial governance function as a generative capability that operates through multiple channels—governance disclosure and cultural participation—while also exerting an independent, direct effect on resilience outcomes.

The significant direct path from EFMP to OR indicates that ethical commitments do more than signal good intentions; they shape decision premises that constrain opportunism and

calibrate risk-taking. From the vantage point of moral virtue and decision-making theories (Kaptein, 2008; Hunt et al., 1989), principled financial conduct embeds standards of fairness and integrity into budgeting, control, and resource allocation.

Such standards act as stabilizers, improving baseline robustness and recovery capacity during shocks, consistent with resilience conceptualizations that emphasize adaptive learning and renewal (Kantur & Iseri-Say, 2012; Lengnick-Hall et al., 2011). The direct effect aligns with evidence that ethical governance is associated with disciplined risk management, legal compliance, and reputational capital—assets that matter acutely when volatility rises (Elhabib, 2024; Sarma et al., 2024; Adeusi et al., 2024; Radouche, 2023; Asikhia, 2016; Addy et al., 2024; Baraibar Diez et al., 2017; Kashyap et al., 2025).

Equally important are the mediated pathways. The EFMP → FTR → OR chain underscores the informational mechanism through which ethics translate into resilience. If ethical norms prescribe honesty and accountability, transparency operationalizes those norms through accurate reporting, accessible disclosure, and accountability to members and regulators. In member-owned institutions, where legitimacy hinges on perceived fairness and inclusion, reduced information asymmetry fosters trust, which, in turn, lowers coordination costs in crises and accelerates collective responses (Rawlins, 2008; Bushman et al., 2004).

The result that FTR significantly predicts OR strengthens the view that disclosure is not merely a compliance exercise but a resilience-enhancing capability: by creating shared situational awareness, it enables faster sensemaking and better alignment of actions under pressure. Digital technologies intensify this effect. Tools such as blockchain can embed traceability and immutable audit trails into financial processes, enhancing accountability and stakeholder confidence (Chatterjee et al., 2023; Ronaghi & Mosakhani, 2021).

Where institutions leverage such technologies, transparency becomes more routine and less person-dependent, contributing to a sturdier governance–resilience nexus (Zioło et al., 2019). In emerging markets, the coupling of ethics, transparency, and stakeholder-oriented practices is further associated with stronger sustainability profiles (Awalluddin & Maznorbalia, 2024; Elgammal et al., 2018; Onesti & Palumbo, 2023; Kathayat, 2024), suggesting that ethical governance has both resilience and sustainability dividends.

The EFMP → CC → OR mediation highlights a complementary, socio-cultural mechanism. Cooperative culture channels ethical intentions into everyday participation, mutual support, and shared problem-solving—social resources that are indispensable for adaptive responses. The literature on culture–performance linkages proposes that involvement, consistency, and mission clarity shape organizational outcomes (Denison & Mishra, 1995; Hartnell et al., 2011). In a CU, where members are both owners and beneficiaries, ethical governance signals respect for member voice and distributive fairness, which fosters identification and discretionary effort.

Research on ethical leadership and organizational behavior further indicates that moral climates encourage learning, psychological safety, and prosocial helping behaviors that underpin resilience during disruption (Bunkaewsuk et al., 2024; Zhu et al., 2015; Gittell et al., 2006). The significance of the CC pathway in the present model is thus conceptually coherent: ethics provide normative direction; culture converts that direction into collective capacity for

adaptation and recovery. Community-oriented engagement, a hallmark of cooperative enterprises, then sustains long-term performance under uncertainty (Nembhard, 2013).

These findings also offer a lens for interpreting contemporary tensions around profit-centric drift in the CU sector. Scholarship documents how profit-oriented governance can edge out member welfare, weaken accountability, and exacerbate agency problems (Kumkit et al., 2022; Sumarwan et al., 2021; Unda et al., 2017; Ngong et al., 2023). In extreme cases, demutualization illustrates the erosion of cooperative identity in favor of shareholder-style priorities (Davis, 2005).

The present evidence suggests that strengthening EFMP, institutionalizing FTR, and cultivating CC constitute mutually reinforcing defenses against such drift. By elevating transparency and participation, these levers realign managerial incentives with member interests, maintain trust, and protect the organizational commons on which resilience depends. The partial—rather than full—nature of mediation is instructive: resilience in CUs is multi-causal, with ethical finance influencing outcomes through both formal governance channels and the social fabric of cooperation. This complementarity helps explain the relatively high R^2 for OR observed here.

Theoretically, the study advances the integration of ethics into resilience scholarship on member-owned financial institutions. Prior research has richly developed operational and strategic aspects of resilience, but has been less explicit about ethics as a first-order organizing principle. By showing simultaneous mediated and direct pathways, the model reframes EFMP as a generative capability that structures both information flows (FTR) and social relations (CC). This triangulation adds nuance to capability-based accounts of resilience (Duchek, 2019) and responds to calls for fuller incorporation of ethical and cultural dimensions into cooperative finance research (Voak et al., 2023; Chouaibi et al., 2022). The findings thus bridge literatures that are often siloed—ethical governance, cooperative culture, and resilience—into a single nomological network relevant to CUs.

Practically, the results point to an actionable governance agenda for CU leaders. First, codify EFMP in finance policies—budgeting, credit risk, procurement, and internal controls—so that moral standards are operational rather than rhetorical (Elhabib, 2024; Sarma et al., 2024). Second, institutionalize FTR by elevating the quality of member-facing disclosures, adopting plain-language reports, and creating channels for two-way accountability. Where feasible, deploy digital infrastructures that harden transparency, such as distributed ledgers for audit trails or secure data rooms with role-based access (Chatterjee et al., 2023; Ronaghi & Mosakhani, 2021). Third, invest in CC by designing participation routines—such as member assemblies, participatory budgeting, and project peer review—and aligning leadership development with ethical and cooperative values (Denison & Mishra, 1995; Hartnell et al., 2011; Bunkaewsuk et al., 2024). These interventions are complementary: ethics guide choices, transparency builds trust, and culture mobilizes effort; together, they strengthen resilience.

Several limitations deserve acknowledgment. The cross-sectional, self-report design limits strong causal inference and raises common-method variance as a potential concern, despite procedural remedies. The single-context sample of 176 respondents, while adequate for

PLS-SEM estimation, may limit generalizability across CU systems with different regulatory and cultural environments.

Measurement invariance across roles (administrators vs. members) was not explicitly examined and warrants future testing. Additionally, the study did not model potential moderators—such as size, digital maturity, or market turbulence—that could condition the strength of EFMP's effects. Future research should address these gaps through longitudinal or panel designs, multi-source data, and robustness checks that include endogeneity diagnostics. Comparative studies across cooperative and non-cooperative financial institutions, as well as mixed-method designs that trace mechanisms in depth, would further clarify how ethics, transparency, and culture coevolve to produce resilience. Incorporating technology-specific measures—e.g., the degree of blockchain adoption or the quality of data governance—could sharpen insights into the link between digital transparency and resilience.

The empirical evidence presented here provides the basis for a richer theoretical discussion of how governance and culture interact to produce resilience in CUs. In the next section, the discussion interprets these results in light of debates on profit-centric drift, stakeholder engagement, and the integration of ethical frameworks in cooperative finance, including the roles of emerging technologies that strengthen transparency and accountability (Chatterjee et al., 2023; Ronaghi & Mosakhani, 2021). The convergence of direct and mediated effects observed in this study will also be related to the broader literature on capability-based resilience and member-driven sustainability.

In sum, the evidence affirms that EFMP, FTR, and CC are interdependent levers that collectively underpin OR in credit unions. By embedding ethical norms in financial governance, rendering conduct visible and answerable, and energizing participation through a cooperative culture, CUs can better anticipate, absorb, and adapt to shocks while staying aligned with their member-centered mission. The model thus provides both a theoretical synthesis and a practical roadmap for strengthening resilience without succumbing to profit-centric pressures that dilute the cooperative ethos.

CONCLUSION

This study, using PLS-SEM analysis of survey data from 381 credit union administrators and members, shows that Ethical Financial Management Practices (EFMP) directly enhance Organizational Resilience (OR) and indirectly do so through partial mediation by Financial Transparency and Responsibility (FTR) and Cooperative Culture (CC), integrating ethics, transparency, and participatory norms into a unified framework that advances resilience beyond profit-centric models in member-owned institutions. Practically, it advises credit union leaders to institutionalize ethical policies, boost member transparency, and nurture cooperative routines to sustain trust and mutual support amid shocks. Despite limitations like its cross-sectional design and single-context focus, the findings offer a strategic roadmap for credit unions to adapt while upholding their mission. For future research, longitudinal studies with multi-source data comparing cooperatives and non-cooperatives could validate these pathways and explore contextual moderators like regulatory environments.

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