

FUNDING-GOVERNANCE NEXUS AND COOPERATIVE SUSTAINABILITY IN MALAYSIA: EVIDENCE FROM SKM DATA (2020-2024)

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Abstract. This study investigates the relationship between financing-related factors, specifically funding sources, funding allocation, and expenditure patterns, and cooperative sustainability in Malaysia's cooperative sector from 2020 to 2024, utilizing governance quality as a moderating institutional mechanism. The study specifically aims to: (i) investigate the correlation between funding source concentration and sustainability outcomes within cooperative size clusters; (ii) analyze disparities in funding allocation efficiency among cooperative functional categories; (iii) explore how expenditure patterns influence sustainability trajectories; and (iv) evaluate whether geographic performance variation aligns with governance quality as a moderating factor in the funding–sustainability relationship. The research utilizes secondary data from the 2024 Malaysian Cooperative Statistics issued by the Malaysian Cooperative Commission (SKM), encompassing 16,284 cooperatives from 2020 to 2024. The analysis use compound annual growth rates (CAGR) and ratio-based metrics to assess funding sources (equity and subscriptions), allocation efficiency (asset utilization), sustainability performance (revenue and membership expansion), and governance-related structural patterns. The results demonstrate that varied and internally sourced finance is positively correlated with sustainability, since large cooperatives dominate sectoral assets and exhibit more robust capital growth. Sustainability performance is more significantly affected by allocation efficiency than by asset size, and disciplined expenditure patterns enhance sustainability outcomes, with small cooperatives surpassing micro cooperatives. Substantial inter-state disparities in asset utilization further underscore the influence of governance quality as a moderating factor affecting financial efficacy. This study enhances the literature on cooperative sustainability by framing governance quality as a moderating institutional factor that influences the efficacy of financial resources, rather than as a direct determinant of performance. Policy implications underscore the necessity for size-specific measures, enhanced governance, and capacity-building initiatives to bolster cooperative sustainability in Malaysia.

Keywords: *cooperative sustainability, funding factors, governance quality, Malaysia, panel data*

Introduction

Malaysia's cooperative sector comprises 16,284 registered cooperatives serving over 7.2 million members, with total assets of RM173.35 billion and annual turnover above RM68 billion (SKM, 2024). These aggregates mask substantial structural diversity: about 40% of cooperatives are inactive or dormant (Bernama, 2022; SKM, 2024), and sector financials are dominated by a few large financial cooperatives while smaller and micro entities face persistent capital and governance constraints (Hamzah and Yusoff, 2025). This paper examines how funding-related factors: sources, allocation, and expenditure patterns, relate to cooperative sustainability, with governance quality as a moderating institutional mechanism, drawing on the Resource-Based View (RBV),

Agency, Stakeholder, Pecking Order, and Trade-Off theories. Four objectives guide the study: (i) the relationship between funding-source concentration across size clusters and sustainability; (ii) the variability of funding-allocation efficiency across functions; (iii) how spending patterns shape sustainability; and (iv) whether geographic performance variation reflects governance quality in moderating the funding–sustainability relationship. Section 2 presents the framework; Section 3, the data and methodology; Section 4, the findings; and Section 5, the conclusions.

Theoretical framework

The conceptual framework (Figure 1) links funding-related factors to cooperative sustainability with governance quality as the moderating variable, integrating five theoretical perspectives.

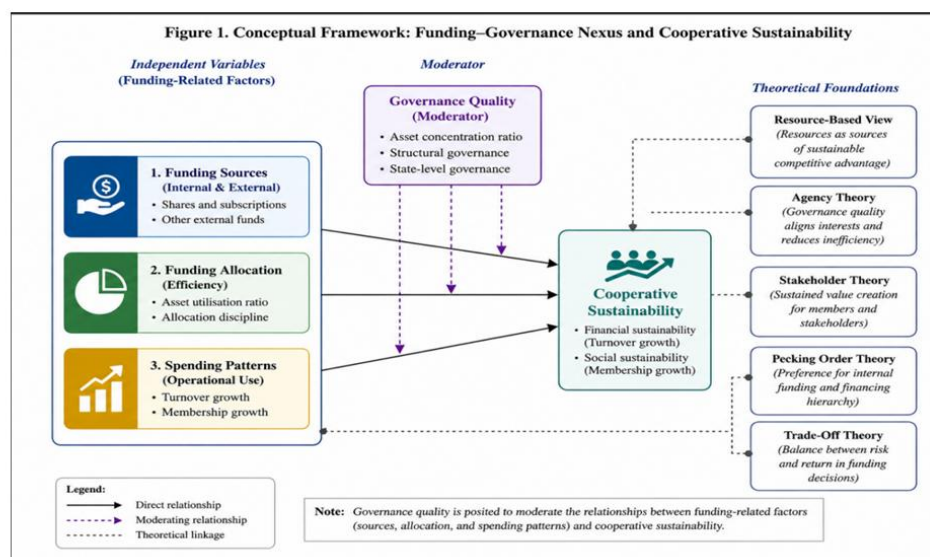


Figure 1. Conceptual framework of the funding-governance nexus and cooperative sustainability.

Theoretical foundations of the funding-sustainability nexus

The Resource-Based View (Barney, 1991; Wernerfelt, 1984) holds that enduring performance depends on valuable, scarce, and distinctive resources. In cooperatives, member share capital and retained earnings are strategic resources for continuity and resilience (Birchall, 2013). RBV implies that cooperatives with diversified, internally sourced funding achieve superior sustainability (H1), and that the quality of resource deployment, not mere availability, drives performance (Penrose, 1959), supporting H2 that strategic allocation improves sustainability (Grashuis, 2020). Agency Theory (Jensen and Meckling, 1976) underpins the moderating role of governance. Members delegate authority to elected boards and management, creating principal-agent relationships prone to information asymmetry and resource misallocation; governance mechanisms such as board oversight, transparent reporting, and internal controls reduce agency costs and align resources with member interests. Governance quality is therefore treated as a moderator rather than a direct predictor (H4): comparable investment yields different outcomes depending on governance (Rahim and Mohamed, 2025).

Stakeholder Theory (Donaldson and Preston, 1995; Freeman, 1984) frames sustainability as multidimensional, spanning financial viability, operational continuity, and resilience across member, employee, and community stakeholders (Grashuis and Su, 2019; Levi and Davis, 2008); this multidimensionality underpins the doctoral study's Cooperative Sustainability Index (CSI), based on share capital, membership, asset growth, and asset utilisation. The Pecking Order Theory (Myers and Majluf, 1984) predicts a preference for internal over external financing, linking funding structure to sustainability (H1, H3), while the Trade-Off Theory (Kraus and Litzenberger, 1973) balances internal-financing autonomy against the limits of under-leveraging (H1–H3). The integrated framework treats funding sources, allocation, and expenditure as three interrelated strategic resource dimensions (RBV) whose conversion into multidimensional sustainability outcomes (Stakeholder Theory) is moderated by governance quality (Agency Theory). *Table 1* maps this framework to the four doctoral hypotheses.

Table 1. Integrated theoretical framework and hypothesis alignment.

H	Research Objective	Theoretical Basis	SKM 2024 Evidence	Direction
H1	RO1: Funding sources - Cooperative sustainability	Resource-Based View (Barney, 1991); Pecking Order Theory (Myers and Majluf, 1984)	Large coops (member equity CAGR 4.19%) outperform Micro (CAGR 1.43%) on all sustainability dimensions	Positive (+)
H2	RO2: Funding allocation - Cooperative sustainability	Resource-Based View; Agency Theory (Jensen and Meckling, 1976)	Consumer coops: 75.15% AUR; Banking: 39.54% AUR - allocation discipline differentiates sustainability	Positive (+)
H3	RO3: Spending patterns - Cooperative sustainability	Trade-Off Theory (Myers, 2001); Agency Theory	Micro coop revenue CAGR -1.03% vs Small +8.89% - spending efficiency drives divergent outcomes	Positive (+)
H4	RO4: Governance quality moderates H1–H3	Agency Theory (Jensen and Meckling, 1976); Stakeholder Theory (Freeman, 1984)	Terengganu AUR 93.22% vs Selangor 28.27% - geographic variation suggests governance conditions differential efficiency	Positive moderation

Source: SKM Perangkaan Koperasi Malaysia (2024).

Review of related empirical literature

Empirical work links internal capital mobilisation to cooperative resilience. Cooperatives with strong member-based capital weathered the global downturn better than externally leveraged firms (Birchall, 2013), and ownership and control structures shape how a cooperative accesses and uses capital (Chaddad and Cook, 2004). In Malaysia, financial management capability and financial literacy are significant determinants of performance, especially among smaller cooperatives facing capital constraints (Hamzah and Yusoff, 2025). A second stream examines governance and performance. Board competence, accountability, and member participation are recurrent predictors of performance, though empirical governance measures remain fragmented (Jamaluddin et al., 2023). Persistent governance weaknesses have been documented in Malaysian cooperatives (Othman et al., 2016; 2013;), and internal control effectiveness varies widely across them (Rahim and Mohamed, 2025). This motivates treating governance quality as a moderating condition rather than a direct determinant of performance. A third stream addresses sustainability determinants, which the literature shows are multidimensional and context-dependent (Grashuis and Su, 2019). Capital adequacy, management capacity, and governance are key determinants in Malaysia (Ismail et al., 2023), and governance and member engagement underpinned resilience

during the pandemic (Yuhertiana et al., 2022). Scale can also erode the social capital on which cooperatives depend (Nilsson et al., 2012), echoing this study's concentration concerns. Few Malaysian studies integrate funding and governance using sector-wide data; existing work is largely theory-led or based on small samples. This study addresses that gap by analysing SKM aggregate data (2020-2024) within a unified, multi-theoretical framework, providing the descriptive foundation for the individual-level panel testing in the doctoral study.

Materials and Methods

Sectoral overview: Aggregate performance trajectory 2020–2024

Table 2 delineates the sectoral panel. The sector experienced growth from 14,629 to 16,284 cooperatives (CAGR 2.72%) and total assets increased from RM150.53 billion to RM173.35 billion (CAGR 3.61%) during the period of 2020–2024. Significantly, aggregate turnover escalated from RM41.47 billion to RM68.18 billion (CAGR 13.24%), primarily driven by the expansion of the Banking function rather than a comprehensive sectoral enhancement. Total membership decreased from its 2022 apex of 7,312,712 to 7,207,179 by 2024, indicating that newly registered cooperatives are smaller and less member-intensive compared to established entities.

Table 2. *Malaysian cooperative sector: Key Performance Indicators 2020–2024.*

Indicator	2020	2021	2022	2023	2024	CAGR (%)
No. of Cooperatives	14,629	14,834	15,315	15,809	16,284	2.72
Total Membership (persons)	6,512,513	7,079,119	7,312,712	7,220,164	7,207,179	2.58
Shares & Subscriptions (RM mil)	15,817.21	16,544.66	16,981.46	17,448.65	18,326.91	3.77
Total Assets (RM mil)	150,533.48	154,983.01	159,607.79	165,895.10	173,349.79	3.61
Turnover / Revenue	41,465.83	37,895.62	45,502.33	64,560.87	68,183.37	13.24

Source: SKM, *Perangkaan Koperasi Malaysia 2024*. CAGR computed by authors using standard compound growth formula.

RO1: Funding sources: Size concentration and internal capital mobilisation

Table 3 pertains to RO1. Large cooperatives (332 entities, 2.04% of the total) possess RM15.98 billion in member shares (87.2% of the sector total) with a compound annual growth rate (CAGR) of 4.19%, significantly surpassing Micro cooperatives (CAGR 1.43%). This disparity in capital mobilization provides empirical support for H1: enhanced internal funding correlates positively with sustainability. Micro cooperatives, representing 82.96% of all entities, manage only 2.40% of sector share capital (RM440.67 million), further exacerbated by limited access to external financing due to collateral constraints (Hamzah and Yusoff, 2025).

Table 3. *Shares and subscriptions by cooperative cluster 2020–2024 (RM million) — Proxy for funding sources (RO1).*

Cluster	2020 (RM mil)	2021 (RM mil)	2022 (RM mil)	2023 (RM mil)	2024 (RM mil)	CAGR (%)
Large	13,564.16	14,231.21	14,448.54	15,162.11	15,984.16	4.19%
Medium	1,268.62	1,310.59	1,489.24	1,213.09	1,351.23	1.59%
Small	568.07	602.71	609.92	561.94	550.85	0.17%
Micro	416.37	400.15	433.76	511.51	440.67	1.43%
Total	15,817.21	16,544.66	16,981.46	17,448.65	18,326.91	3.77%

Source: SKM, *Perangkaan Koperasi Malaysia 2024*. Note: Shares and subscriptions serve as proxy for internal funding sources capacity; CAGR reflects the structural trend of capital mobilisation.

RO2: Funding allocation: Asset utilisation heterogeneity across functions

Table 4 examines RO2. The use of assets differs significantly between cooperative functions. Housing recorded only 13.60% utilisation, compared to 75.15% for consumer cooperatives, indicating disparities in the efficiency of asset allocation. The Credit function shows declining turnover despite a large asset base, raising sustainability concerns. These findings support H2 that allocation discipline, rather than asset scale, influences sustainability.

Table 4. Financial performance by cooperative function 2024 — Proxy for funding allocation efficiency (RO2).

Cooperative Function	No.	Assets (RM mil)	Turnover (RM mil)	Turnover CAGR (%)	Asset Utilisation (%)	Sustainability Implication
Banking	2	135,463.12	53,561.73	15.65	39.54	Asset-intensive; stable
Credit	554	16,714.91	6,065.23	-1.53	36.29	Revenue declining - risk
Agriculture	3,787	4,073.84	1,689.57	12.25	41.47	Moderate - improving
Consumer Services	5,626 4,935	2,957.56 12,380.52	2,222.48 3,587.30	13.01 18.08	75.15 28.98	High efficiency Rapid growth; low AUR
Housing	309	1,131.06	153.87	3.13	13.60	Very low utilisation
Transport	464	393.80	774.88	7.00	196.77	Capital-light model
Construction	268	130.14	92.05	15.30	70.73	Efficient -small base
Industrial	339	104.84	36.27	9.45	34.60	Low scale, moderate
Total	16,284	173,349.79	68,183.37	13.24	39.34	-

Source: SKM, *Perangkaan Koperasi Malaysia 2024*. Asset Utilisation Ratio = (Turnover / Assets) × 100. Sustainability implication assessments by authors based on five-year trend analysis.

RO3: Spending patterns: Productivity divergence across size clusters

Table 5 pertains to RO3. Despite owning only 1.04% of sector assets, small cooperatives have better sustainability performance, attaining positive turnover and membership growth. Micro cooperatives, on the other hand, report decreasing membership and turnover. Despite having comparable asset bases, the differences between these groups imply that spending control rather than the availability of resources is a crucial factor in determining sustainability, supporting H3.

Table 5. Turnover and membership growth by cluster 2020–2024 — Proxy for spending patterns (RO3).

Cluster / Indicator	2020	2021	2022	2023	2024	CAGR (%)
Turnover Growth (RM Million)-Proxy For Spending Efficiency						
Large	39,573.53	35,932.29	43,553.41	62,380.86	65,799.06	13.55%
Medium	1,047.63	1,124.80	1,119.83	1,211.29	1,328.18	6.11%
Small	550.34	557.42	535.49	689.92	773.69	8.89%
Micro	294.32	281.11	293.60	278.81	282.44	-1.03%
Membership growth-Proxy for operational sustainability						
Large	2,887,639	2,943,252	3,160,155	3,318,896	3,095,821	1.76%
Medium	615,856	795,209	797,904	519,365	760,925	5.43%
Small	975,589	1,084,411	960,680	1,338,110	1,515,886	11.65%
Micro	2,033,429	-	2,393,973	2,043,793	1,834,547	-2.54%

Source: SKM, *Perangkaan Koperasi Malaysia 2024*. Turnover growth and membership growth serve as proxies for spending efficiency and operational sustainability outcomes respectively. 2021 Micro membership data unavailable.

RO4: Governance moderation: Geographic variation as structural evidence

Table 6 pertains to RO4. Asset utilisation varies significantly amongst states, from 28.27% in Selangor to 93.22% in Terengganu. Despite having a very small cooperative base, Terengganu obtains higher utilisation, indicating that issues connected to governance may improve resource production. Selangor, on the other hand, reports lower utilisation while having significant assets, suggesting that operational sustainability and success are not always correlated with financial magnitude. The observed asset-utilization gap is consistent with H4, which postulates that governance quality moderates the funding–sustainability link. This geographic trend is handled here as a structural inference rather than an empirical measurement of governance quality. This interpretation is structural and tentative since governance is inferred indirectly from comparative asset utilisation rather than directly quantified; in the doctorate study, it is explicitly tested using direct, cooperative-level governance indicators.

Table 6. State-level cooperative financial profile 2024-Structural evidence for governance moderation (RO4).

State	No. Coops	Assets (RM mil)	Turnover (RM mil)	Asset per Coop (RM mil)	Asset Util. (%)	Structural Inference
Johor	1,458	1,411.45	824.57	0.97	58.42	Moderate governance
Kelantan	1,013	1,898.04	660.73	1.87	34.81	Asset-heavy, low efficiency
Pahang	1,173	1,705.56	979.82	1.45	57.44	Balanced allocation
Selangor	2,189	2,816.07	796.23	1.29	28.27	Low AUR-governance gap
Terengganu	871	791.14	737.50	0.91	93.22	Highest AUR-strong discipline
Sabah	1,994	1,008.15	774.45	0.51	76.82	Efficient despite small base
Sarawak	1,213	703.54	411.48	0.58	58.49	Moderate
W. Persekutuan	1,214	22,449.59	7,114.65	18.49	31.69	Dominated by large coops

Source: SKM, *Perangkaan Koperasi Malaysia 2024*. Asset Utilisation = $(\text{Turnover}/\text{Assets}) \times 100$. The “Structural Inference” column reports the authors’ structural interpretation based on comparative asset-utilisation performance; it is not a direct empirical measurement of governance quality. Formal governance measurement requires the individual-cooperative panel data employed in the doctoral study.

Materials and Methods

This study relies on aggregate statistics from SKM at the sector, function, size-cluster, and state levels. While these data reveal important patterns, they do not allow causal testing at the individual cooperative level. Therefore, hypothesis testing is conducted in the doctoral study using cooperative-level panel data. In addition, governance quality is not measured directly in this analysis. The state-level differences are interpreted as structural indicators based on asset-utilisation performance rather than direct governance measures. Formal governance effects are examined in the doctoral study through a Governance Quality Index (GQI).

Results and Discussion

Theoretical implications

There are four important findings. First, while controlling 96.2% of sector assets, large cooperatives utilise their assets at a lesser rate (39.47%) than small cooperatives (43.04%), indicating that greater resources do not always translate into higher performance. Second, despite having a sizable asset base, the Credit function displays decreasing turnover, suggesting potential governance flaws. Third, significant variations in asset utilisation between cooperative roles (13.60%–196.77%) imply that operational environment affects sustainability. Fourth, regional variations in asset utilisation (28.27%–93.22%) suggest that governance quality may have an impact on resource efficiency. Panel regression analysis will be used in the PhD study to investigate these links.

Policy implications

Four policy imperatives emerge. Initially, SKM's overall measures obscure the declining conditions inside 15,952 non-Large cooperatives; performance targets segmented by size are crucial. Secondly, micro cooperatives (13,508 entities) necessitate compulsory post-registration assistance, including financial management training, market connection, and viability evaluation, rather than only registration facilitation. The diminishing revenue of the Credit function necessitates intensified supervisory oversight, including improved liquidity monitoring, enforcement of governance compliance, and evaluation of board competence. Fourth, states exhibiting poor AUR (Selangor 28.27%, Housing function 13.60%) should undergo targeted governance capacity enhancement, whereas high-performing states (Terengganu 93.22%, Sabah 76.82%) provide benchmarks for inter-state learning.

Conclusion

This study examined the structural relationship between funding-related elements and cooperative sustainability in Malaysia utilizing SKM aggregate data from 2020 to 2024. Four primary findings validate the study's theoretical framework. The stronger internal capital mobilization of large cooperatives (CAGR 4.19%) compared to micro entities (CAGR 1.43%) substantiates H1. Functional disparities in asset utilization (13.60%–75.15%) affirm that allocation discipline, rather than scale, propels sustainability (H2). The superior turnover increase of small cooperatives compared to micro entities (8.89% against –1.03%) substantiates H3. Geographic AUR heterogeneity (28.27%–93.22%) offers structural evidence that supports the notion of governance quality modulating the funding-sustainability relationship (H4). The research delineates the empirical framework for the PhD program's individual-cooperative panel analysis, rigorously evaluating hypotheses H1–H4 using composite CSI and GQI indices. Future study should utilize longitudinal panel methodology and cooperative-level governance data to determine causal relationships between financing decisions and sustainability results.

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Conflict of interest

The authors confirm that there is no conflict of interest involved with any parties in this research study.

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