

A SHARED VALUE STRATEGY IN COOPERATIVE ENTERPRISES: THE ROLE OF HUMANISTIC GOVERNANCE

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ABSTRACT: Cooperatives, as social enterprises, prioritize community welfare and shared value over profit maximization. This study contributes a novel integrative framework that links frugal innovation, creating shared value (CSV), and humanistic governance to cooperative performance, addressing a gap in cooperative governance research. Employing SmartPLS3 with conditional mediating (CoMe) analysis, data were collected from 342 fishermen across Java. Findings reveal that CSV significantly mediates the relationship between frugal innovation and cooperative performance, while humanistic governance positively moderates the CSV–performance link. This model offers empirical validation for applying corporate governance principles in cooperative settings. Theoretically, it advances understanding of how governance enhances value creation in social enterprises. For practitioners, the results underscore that strengthening humanistic governance is not merely ethical but strategic—leaders must cultivate participatory, value-driven governance to boost cooperative outcomes. This research marks an early empirical attempt to operationalize governance's conditional role in social business ecosystems.

Keywords: Shared Value; Frugal Innovation, Humanistic Governance; Cooperative Performance; Strategy

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INTRODUCTION

Indonesia possesses vast fishery resources, offering strong potential to uplift fishermen's livelihoods and national economic resilience (Saidin et al., 2022; Stacey et al., 2021; Kusmiati et al., 2023). Despite this, the sector remains heavily reliant on small-scale fishers (SSF), many of whom live in poverty (FAO, 2002; Sanyal et al., 2023). Cooperatives are widely recognized for fostering sustainable economic development and employment globally, benefiting over 280 million individuals (Jamaluddin et al., 2023). As socially driven enterprises, cooperatives aim for inclusive development via participatory governance (Camargo Benavides & Ehrenhard, 2021; Gupta et al., 2020; Mnguni & Mdiniso, 2024), rooted in values of equity, solidarity, and self-governance (Chandran & Kumar, 2024; Restakis, 2020). In Indonesia, cooperatives—despite their constitutional role—face structural challenges and a high dissolution rate, especially among SSF units. The FAO (Nakamura et al., 2021) underscores the importance of cooperatives in promoting welfare, gender equity, and resilience in coastal communities (Halim et al., 2020; Mukherjee et al., 2022).

Globally, cooperatives thrive in various sectors—from agriculture in Europe (Ajates, 2020) to rural poverty alleviation in Bosnia (Gava et al., 2021). However, Indonesian SSF cooperatives still face barriers in access to markets, infrastructure, and state support. Strategically, cooperative enterprises remain underexplored within the resource-based theory (RBT) framework despite their firm-like characteristics (Ismail et al., 2021; Barney et al., 2021). RBT views value creation as a synergy between organizational capabilities and economic outputs (Teece et al., 1994; Prahalad & Hart, 2002), yet existing strategy models largely emphasize profit (Gerrits & Pennink, 2022).

Porter and Kramer's (2011) concept of Creating Shared Value (CSV) extended this paradigm by aligning profit with societal impact (Menghwar & Daood, 2021; De Tommaso & Pinsky, 2022). CSV may be fostered through innovation, leadership, and organizational structure (Camilleri et al., 2023; Kang & Na, 2020; Koo et al., 2019; Bergengren & Präauer, 2016), although governance models still reflect agency theory's narrow financial view (Novkovic & McMahon, 2023). Conversely, cooperatives prioritize collective well-being over profitability (Birchall, 2012), supported by democratic governance structures (Pirson & Turnbull, 2011) and human-centered values (Gerrits & Pennink, 2022). Humanistic governance strengthens long-term commitment and interpersonal trust (Pirson & Turnbull, 2011), which are vital for cooperative performance, along with innovation, social capital, and entrepreneurial mindset (Yousaf et al., 2022; Maestre Matos et al., 2023; Christensson, 2020; Jamaluddin et al., 2023).

Yet, the literature remains inconclusive on governance-performance relationships in cooperatives (Singh et al., 2020; Jamaluddin et al., 2023). In resource-limited settings like Indonesia, frugal innovation—using minimal resources for high impact—offers a promising pathway (Mishra, 2021; Cuevas-Vargas et al., 2022). This is especially relevant for SSF innovations such as solar-powered cooling and fish lures (Basbeth, 2024). Despite these developments, empirical studies rarely explore how frugal innovation translates into performance via CSV, moderated by humanistic governance. This study addresses these gaps by examining three objectives: (1) to evaluate frugal innovation's effect on cooperative performance, (2) to test humanistic governance as a moderator, and (3) to assess CSV as a mediator. By doing so, this research contributes to the literature on cooperative strategy, emphasizing humanistic governance as a key mechanism for shared value creation and economic resilience in SSF cooperatives.

THEORETICAL REVIEW

SSF Cooperative and Creating Shared Value

Small-scale fisheries (SSF) cooperatives consist of fishermen who collaborate to enhance their livelihoods through collective economic and social efforts. These cooperatives play a vital role in helping members manage product marketing, processing, logistics, storage, and financing. They also accelerate the adoption of new technologies and skills (Manda et al., 2020; Zhang & Wu, 2023). Functioning as traditional economic organizations, SSF cooperatives contribute significantly to increasing fishermen's income and achieving shared prosperity, especially for

those with limited access to resources (Sanyal et al., 2023). Moreover, they strengthen community resilience by facilitating knowledge exchange, improving bargaining power with market actors, building strategic networks, and preserving indigenous knowledge systems (Sari & Rahmayanti, 2022). Their sustainable governance is crucial for advancing fishery productivity and supporting socioeconomic development through empowerment and service delivery (Ilosvay et al., 2024; Mahanayak & Panigrahi, 2021).

The concept of Creating Shared Value (CSV), introduced by Porter and Kramer (2011), reframes corporate strategy by linking business success with societal advancement. CSV advocates that companies can simultaneously boost competitiveness and improve socioeconomic conditions in their operating environments—a mutually beneficial approach. According to Menghwar and Daood (2021), CSV consists of a strategic orientation, integration with the value chain, and direct economic benefit. While its practical application has been debated, an expanding body of literature continues to explore CSV empirically in sectors such as consumer goods (Becher, 2022), agriculture (Maestre Matos et al., 2023; Ollivier de Leth & Ros-Tonen, 2022), sustainable food systems (Tessényi & Katona, 2022), and microfinance (Rokhim et al., 2023). In alignment with these perspectives, SSF cooperatives represent a concrete embodiment of the CSV model, as they simultaneously address economic challenges and social welfare (Pirson, 2012).

Frugal Innovation and Cooperative Performance

Frugal innovation in healthcare demonstrates how creative, efficient, and timely solutions may be developed to offer affordable, suitable healthcare solutions for both high-income and low- and middle-income nations (Sarkar & Mateus, 2022). Frugal innovation in healthcare will allow policy makers to take these cheap costs into account when developing reverse innovative healthcare solutions (Sarkar & Mateus, 2022). With an emphasis on the role of digital technology and value creation in low-income markets, Musona (2021) addressed about new business models for frugal innovation in promoting sustainable smallholder agriculture in Kenya. The study of Berndt et al. (2023) showed that frugal innovation and operational success were positively correlated. Therefore, using frugal innovation to maximize solutions for a wide population while using a small number of resources is crucial to improving a company's operating efficiency (Berndt et al., 2023). Since frugal innovation creates new possibilities and business models, emerging countries would be well advised to find business models that can be implemented in resource-constrained situations while also pursuing value-conscious consumers.

H1: Frugal innovation has a positive impact on cooperative performance

Frugal Innovation and Creating Shared Value

The lack of resources to create shared value is a common issue that makes organizations rethink their innovative strategies (Santos et al., 2022). Frugal innovation is a type of innovation that is designed for situations where resources are limited. It is known for its ability to reduce costs, focus on essential functions, and use sustainable, collaborative creation. (Shahid et al., 2023). Hossain (2016) define frugal innovation as a solution created and implemented with low resources. This solution might be a product, a service, a process, or a business plan. It is developed and implemented despite a lack of financial, technological, material, or other resources. The end result is significantly less expensive than comparable items or services from rivals. It is also adequate to fulfil the fundamental needs of clients who would be unable to obtain what they want elsewhere (Hossain, 2016).

Although Hossain (2018) points out frugal innovation as a form of innovation applied to both emerging and advanced countries, however, many empirical studies take place in emerging economies for example study of e.g. Levänen et al. (2022) study frugal innovation in India. Santos et al. (2022), study frugal innovation in Peru, a country that has a 95% humidity rate but with low annual rainfall. An engineering college developed a giant advertising billboard that absorbs the humidity in the air. It condenses the moisture, purifies it and generates more than 90 L of drinkable water every day. Another example in underserved communities of Cape Town, citizen groups developed frugal social innovations to address local challenges. One initiative involved creating affordable, sustainable housing using recycled materials. This project not only provided shelter

but also empowered residents through skill development, exemplifying how frugal innovation can generate economic and social value (Lorini,2018). In Indonesia, (Baskoro et al.,2019) constructed squid attractors from old barrels and were placed to boost squid output in East Lombok Regency. The effectiveness of the attractors in Tanjung Luar waters is 63%, demonstrating their ability to raise SSF cooperatives' revenue.

Frugal innovation helps the poor change products, services, and business models to make them simpler and cheaper, helps the environment and society, and it also creates economic value (Pedroso et al.,2023; Sánchez-Medina et al.,2024). Frugal innovation provides appropriate solutions at significantly lower costs and with fewer resources, making it suitable for the contexts present in emerging countries (Sánchez-Medina et al.,2024), serves the poor through the redesign of products and services to reduce complexity and total life cycle costs, combining economic value with environmental and social benefits (Dabić et al.,2022; Niroumand et al.,2021). These findings align with theory in some literature, that factors affecting creating shared value is frugal innovation (Camilleri et al.,2023; Porter & Kramer,2018).

H2: Frugal innovation has a positive effect on creating shared value

The Mediating Effect of Creating Shared Value

The theory of Creating Shared Value (CSV) has been widely applied to explore outcomes that blend social impact with business success. Evidence indicates that CSV contributes to both societal progress and corporate profitability, with companies like Nestlé, Unilever, General Electric, and Walmart frequently cited as practical examples (Porter & Kramer, 2011). In the context of the sharing economy, Kang and Na (2020) highlight that value participation—a dimension of CSV—can enhance performance by encouraging resource-sharing among participants. CSV shifts the conventional purpose of firms by integrating social problem-solving into their economic missions. It further emphasizes the pursuit of financial returns alongside corporate legitimacy (Khurshid & Snell, 2021, 2022). Bang et al. (2020) provide additional support, noting that CSV activities such as technological investment, timely payments, and financial support significantly improve the business outcomes of partner firms. These findings illustrate how shared value initiatives can drive mutual growth and reinforce long-term cooperative performance.

H3: Creating shared value has a positive impact on performance

This study is to determine the mediating effect of CSV, to do that, first, we discovered from the literature that performance is positively impacted by frugal innovation. (Berndt et al.,2023; Cuevas-Vargas et al.,2022; Mishra,2021; Musona,2021; Sarkar & Mateus,2022). Second, we found that frugal innovation has a positive impact on CSV (Camilleri et al.,2023; Dabić et al.,2022; Hossain,2016, 2018; Levänen et al.,2022; Lorini,2018; Niroumand et al.,2021; Pedroso et al.,2023; Porter & Kramer,2018; Sánchez-Medina et al.,2024; Santos et al.,2022; Shahid et al.,2023). Third, it has been proven that CSV has a positive impact on cooperative performance (Bang et al.,2020; Kang & Na,2020; Khurshid & Snell,2022; Porter et al.,2011). Therefore, it is hypothesized that

H4: Creating shared value mediates the relationship between frugal innovation and cooperative performance

The Moderating Effect of the Humanistic Cooperative Governance

Discussions on cooperative governance often emphasize organizational structure, particularly in terms of ownership, control, and the responsibilities of the board of directors (Novković & Šimleša, 2023). In democratic enterprises, governance refers to the mechanisms through which members define goals and provide strategic direction, ensuring leaders implement collective objectives effectively (Novković et al., 2023). Governance involves the interaction between structural elements and procedural functions that evolve in response to internal and external changes (Eckart, 2009). As Kyazze et al. (2017) argue, effective cooperative governance contributes to organizational performance by safeguarding rights and enabling innovation. It also ensures proper oversight of financial and non-financial activities, promoting accountability in the use of member resources. This aligns with Jamaluddin et al. (2023), who define cooperative

governance as a supervisory and regulatory system encompassing roles of boards, members, employees, and management—echoing broader definitions of corporate governance.

Supporting Eckart's emphasis on procedural importance, Novković et al. (2023) stress that in cooperatives, learning and adaptation are fundamental to democratic governance. Cooley (2020) and Basterretxea et al. (2022) further highlight how organizational change is driven by the dynamic interplay between processes and structures. Within this framework, the humanistic theory of the firm advocates for the protection of human dignity and stakeholder inclusion in decision-making (Pirson, 2012, 2022). Democratic cooperatives are therefore tasked not only with strategic adaptation but also with upholding human values (Novković et al., 2023). While performance outcomes in cooperatives are influenced by governance quality, innovation—particularly when frugal—can have mixed effects. Excessive cost-cutting may undermine trust or product reliability, weakening CSV outcomes (McMurray et al., 2019; Shumbanhete et al., 2025). Because the relationship between frugal innovation and CSV is context-dependent, governance structures and environmental factors can shape this link, especially within SSF cooperative settings (Singh et al., 2020).

H5: Humanistic governance moderates the relationship between CSV and cooperative performance through CSV, such that the relationship is stronger when humanistic governance is high.

We present figure 2 depicting the phenomena in the SSF cooperative business

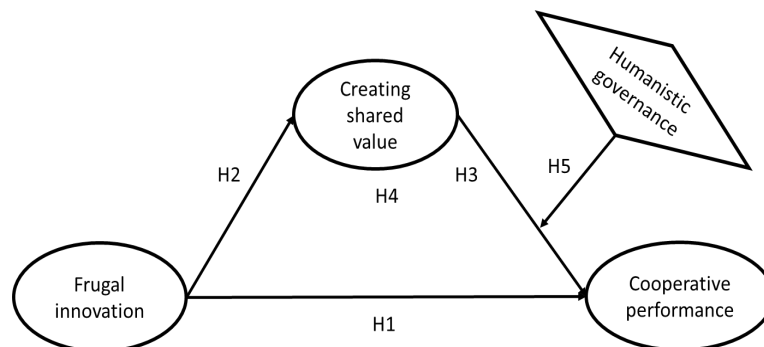


Figure 1. Conceptual Framework
Source: Adapted from various source (2025)

RESEARCH METHOD

Data collection method

The survey was conducted in two SSF cooperatives on the island of Java located in Pelabuhan Ratu (West Java province), Cilacap (Central Java province) and Sidoarjo (East Java) province, Indonesia. A non-probability purposive sampling employed to select respondents who meet the criteria of: a) residing in the coastal area, b) working mostly as a fisherman, and c) a member of SSF cooperatives. The overall sample size of this research was 342 samples total, with 114 samples from each of the two regions: Cilacap, Pelabuhan Ratu, and Sidoarjo having the same number of samples.

Measurement

Responses to items in the questionnaires, were recorded on a five-point Likert scale, ranging from “strongly disagree” (1) to “strongly agree” (5). All measurement items are provided in the Table 2. To define the variable of frugal innovation, we used three dimensions that originated from the previous studies, frugal innovation represented by three dimensions: frugal functionality, frugal cost, and frugal ecosystem (Shehzad et al., 2022). The questionnaire's related CSV was adopted from Porter et al. (2011) consist of three level The first level measures perceptions on many elements regarding product and market share. The questionnaire's second

level explores how value chains affect the operational management. The third level investigates many facets of cluster development with the goal of evaluating how businesses affect social circumstances, promoting social growth and opportunity, raising incomes, and using local labor. One example item was “We focus on reducing logistics and operation costs”. Humanity governance was measured using the three-dimension scale developed by (Novković et al.,2023; Novković & Šimleša,2023). The three dimensions are: structures, processes, and dynamics. One example of item was “As a member we have an annual meeting to discuss the financial report.” Since SSF cooperatives set the standard for a (moral) values-based economy that supports the Sustainable Development Goals (SDGs), they are urged to report on their social and ecological impact (Novković & Šimleša,2023). Therefore, the SDGs goals—no poverty, zero hunger, excellent health and well-being, quality education, decent employment and economic growth, life under water, and cooperation for the goals, are included in the items in dependent variable of performance. The items in the cooperative performance were adopted form Novković and Šimleša (2023), and Porter et al. (2011). .

Table 1. Operationalization of variables

Variable/ Source	Variable	Items	Measurement item
Frugal Innovation (FI) (Shehzad et al.,2022)	Frugal Functionality (FF)	FF1	We provide products and services that focus on core functionality
		FF2	We search for new solutions that offer ease of use of products
	Frugal Cost (FC)	FC1	We introduce new solutions that offer good and cheap products
		FC2	We significantly reduce cost in the operational process
	Frugal ecosystem (FE)	FE1	We have commitment in developing a sustainable and productive partnership in its supply chain
		FE2	We frequently improve partnerships with local firms in operation
Creating Shared Value (Porter et al.,2011)	Reconceiving product and market (PM)	PM1	We focused on innovation activities
		PM2	We focus on creating a new market
	Redefining productivity in the value chain (VC)	VC1	We focus on productivity and cost saving
		VC2	We focus on reducing logistics and operation costs
	Enabling community development CD)	CD1	We focus on the secured supply of marine products
		CD2	We focus on workforce access improvement
Humanistic governance system (Novković et al.,2023)	HG Structure (HS)	HS1	We own and control the cooperative
		HS2	We have an annual meeting to discuss the financial report.
	HG Process (HP)	HP1	We focus on member engagement, feedback, and transparency
		HP2	We focus on monitoring and control
	HG Dynamic (HD)	HD1	We focus on innovative solutions when external factors intense
		HD2	We respond to a crisis immediately
Cooperative performance (Novković & Šimleša,2023)	Business performance (BP)	BP1	Our revenue has increased
		BP2	Our productivity has improved
	Social performance (SP)	SP1	The member's income has improved
		SP2	Job creation has increased
	Environmental performance (EP)	EP1	We care for maritime conservation
		EP2	We focus on using renewable energy in operations

Source: Adapted from various sources (2025)

Data analysis method

This study employed Partial Least Squares Structural Equation Modelling (PLS-SEM) using SmartPLS4 to analyze the proposed relationships. As a predictive and variance-based method, PLS-SEM is widely adopted in social science research for handling complex models and small sample sizes (Hwang et al., 2010; Henseler, 2017). Rather than treating moderation and mediation independently—common in PLS-SEM studies (Becker et al., 2018; Sarstedt et al., 2020)—this research utilizes conditional mediation (CoMe), which combines both approaches to examine how mediated effects shift across different levels of a moderator (Nitzl et al., 2016; Sarstedt et al., 2020). According to Hayes (2018), conditional mediation occurs when the strength of an indirect effect is contingent on a moderating variable. In this context, three interrelated stages are assessed: the relationship between frugal innovation (FI) and CSV as the mediator; the link from CSV to cooperative performance (CP); and the moderation effect of humanistic governance (HG) on the CSV–CP relationship (Cheah et al., 2021).

SmartPLS 4 follows a two-step approach consisting of measurement model evaluation and structural model testing (Chin et al., 2010; Hair et al., 2014). For the measurement model, internal consistency is assessed via Cronbach's alpha and composite reliability (ρ_A , ρ_C), where values above 0.7 are considered acceptable and those above 0.9 are excellent (Hair Jr et al., 2017). Convergent validity is evaluated by examining indicator outer loadings—ideally above 0.708—and the average variance extracted (AVE), which should exceed 0.5 to confirm that constructs explain sufficient indicator variance. For the structural model, key evaluation criteria include path coefficients (β), the coefficient of determination (R^2), and multicollinearity levels using Variance Inflation Factor (VIF). Path coefficients should ideally range between -1 and +1, with values closer to ± 1 indicating stronger effects, while VIF values below 5 suggest no multicollinearity issues.

RESULT

Respondent Profile

The respondent demographic is in Table 2. All participants are male fishermen, young generation 31 – 35 years of age (28%), and (53%) is a junior high school education

Table 2. Respondent profile

Demographics	Items	Frequency	Percent (%)
Gender	Male	114	100%
	Female	0	0%
Location	Pelabuhan Ratu	114	33.3%
	Cilacap	114	33.3%
	Sidoarjo	114	33.3%
Age	20 - 25	30	9%
	26 - 30	68	20%
	31 - 35	95	28%
	36 - 40	88	26%
	41 and above	61	18%
Education	Junior high school	180	53%
	High school	152	44%
	Junior college	10	3%
Job title in cooperative	Cooperative management	27	8%
	Member	315	92%

Source: Adapted Questionnaire Profiling, (2025)

As illustrated in Table 2, SSF cooperatives in three areas managed by 8% of the sample held a managerial position. In Pelabuhan Ratu managed by 7, and in Cilacap and Sidoarjo managed by 10 fishermen.

This study employed a single source of respondents to gather data on dependent and independent components; therefore, common method variance must be checked (Tehseen et al.,2017). To test for common method variance, we assessed the collinearity among constructs. The variance inflation factors are assessed (Kock & Lynn,2012). These variance inflation factors may be employed to evaluate common method variance, resulting in a more conservative test than the usual exploratory factor analysis (Kock,2014; Kock & Lynn,2012). All of the constructs in the model have a complete collinearity variance inflation factor of less than 5 (J. Hair Jr et al.,2014). As a result of testing for common method variance using VIF (Table 4), we can safely infer that common method bias did not pose a significant risk

Evaluation of the measurement model

The model utilized in this study consisted of four constructs, each reflected by three dimensions and two items (Figure. 2). The validation and reliability of the measurement model are evaluated using the model's latent variables

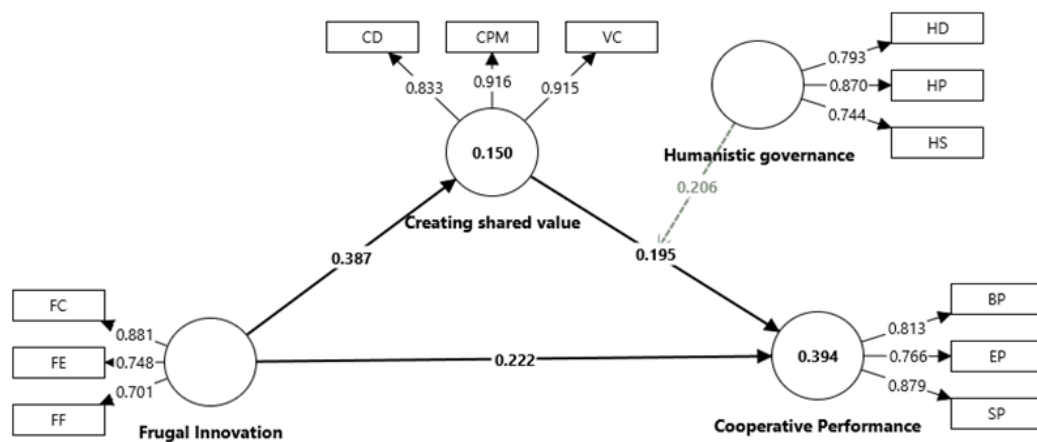


Figure 2. Research model
Source: Adapted Smartpls 4 Output, (2025)

As can be seen in Figure .2, the R^2 of CSV is 0.15, and 0,394 for cooperative performance demonstrates a moderate level of precision. The outer loadings of variables are greater than 0.7 for validity to be deemed satisfactory. The Cronbach's alpha values of all variables exceed 0.70 (Table 3), indicating that the model has internal consistency (Hair et al.,2011). The composite reliability (CR) is above 0.7, indicating excellent reliability.

Table 3. Construct validity and reliability

Constructs	Alpha	CR	AVE	VIF
Frugal innovation (FI)	0.713	0.795	0.608	1.241
Cooperative performance (CP)	0.756	0.765	0.673	1.000
Creating shared value (CSV)	0.868	0.901	0.790	1.298
Humanistic governance (HG)	0.732	0.770	0.647	1.164

Source: Adapted Smartpls 4 Output, (2025)

The Average Variance Extracted (AVE) was used to establish convergent validity (Chin et al.,2010; Hair et al.,2011). AVE value should be higher than .50 (Hair et al.,2014). Table 3 shows that AVE values for all constructs are above 0.50, so convergent validity was established. The examination of the structural model focuses on how variables interact with one another (Chin et al.,2010; Hair Jr et al.,2014). We also test the coefficient of determination R^2 is the first step in evaluating the structural model, path coefficient (β), and collinearity issues (VIF) (Hair et al.,2014). VIF values are all below 5, showing no collinearity issues (Hair et al.,2011).

The hypothesis was tested using a 5000 bootstrap. As can be seen in Table 4, all hypotheses are supported. Analysis shows that frugal innovation had a positive effect on cooperative performance ($\beta = 0.222$, $p < .005$), supporting hypothesis 1. Frugal innovation had a

positive effect on creating shared value ($\beta = 0.387$, $p < .005$), supporting hypothesis 2. Furthermore, an analysis of the creating shared value on cooperative performance demonstrated that creating shared value had a positive influence on cooperative performance ($\beta = 0.195$, $p < .005$), supporting hypothesis 3.

Tabel 4. Hypothesis testing

Paths	β	t -value	p -value	Decision
FI \rightarrow Coop Performance	0.222	2.894	0.004	Supported
FI \rightarrow CSV	0.387	5.104	0.000	Supported
CSV \rightarrow Cooperative Performance	0.195	2.586	0.010	Supported
Moderating effect of Humanistic Gov.	0.206	3.327	0.001	Supported
Frugal Innovation \rightarrow CSV \rightarrow Coop. Perf	0.075	2.369	0.018	Supported
Total effect (FI \rightarrow Coop. Perf)	0.298			

Source: Adapted Smartpls 4 Output, (2025)

We also examined whether CSV mediate the relationship between frugal innovation and cooperative performance. The results showed that the indirect effect of frugal innovation to cooperative performance through creating innovation is significant ($\beta = 0.075$, $p = 0.018$). The confidence interval bias-corrected showed in 2.5% and 97.5% confidence interval bias-corrected 2,5% and 97,5% values do not contain zero, therefore, the effect is significant (Hair Joseph et al.,2017). Therefore, hypothesis 4 is supported. As illustrated in Table 5, the moderating effect of humanistic governance on the relationship between share value creation is positive and significant ($\beta = 0.206$, $p = 0.01$). To illustrate the interaction between variable CSV, FP and HG, we draw a simple slope analysis (Figure 3)

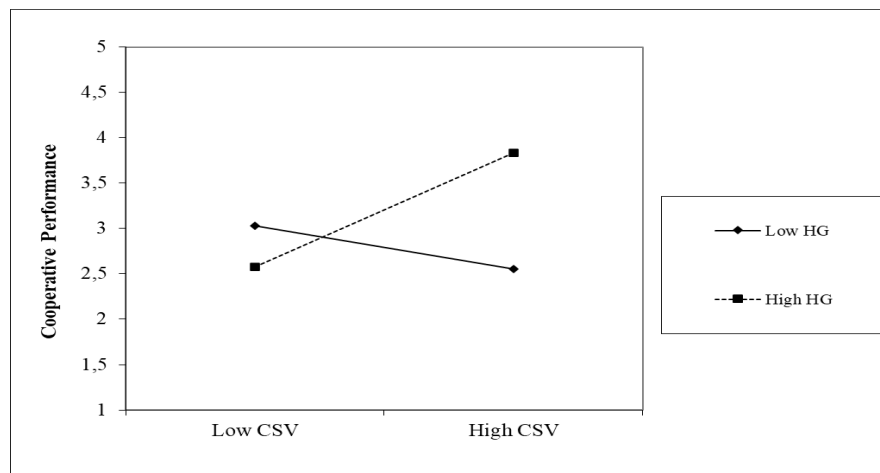


Figure 3. Simple plot of moderating effect Humanistic governance
Source: Excel Graphic Output, (2025)

DISCUSSION

This study collaborated with three small-scale fisheries (SSF) cooperatives across three provinces on Java Island to explore the dynamics of frugal innovation, Creating Shared Value (CSV), and cooperative performance. Drawing on CSV and frugal innovation theory, we examined how innovation using limited resources can indirectly improve cooperative performance through the strategic mechanism of CSV. The performance indicators—business, social, and environmental—represent the multifaceted impact of cooperative operations. Notably, business and social performance were the dominant components, as evident with the outer loadings. This indicates that, although cooperatives are socially driven enterprises, environmental outcomes remain a secondary concern in practice. As highlighted by McMurray et al. (2019), excessive cost-efficiency strategies may deprioritize ecological responsibilities, raising a call for greater environmental consciousness in cooperative innovations.

The findings of this study are fourfold: (1) frugal innovation significantly enhances the business and social performance of SSF cooperatives; (2) frugal innovation, CSV, and cooperative performance are positively correlated; (3) CSV mediates the relationship between frugal innovation and cooperative performance; and (4) humanistic governance moderates the CSV–performance link. When humanistic governance is high, the influence of CSV on performance is substantially amplified. This reinforces prior scholarship that regards governance as a key contextual factor in organizational effectiveness (Novković et al., 2023; Pirson, 2012). Together, these results offer important theoretical advancement and actionable insights for SSF cooperative management.

First, the strong effect of frugal innovation on CSV suggests that cooperative managers must foster a culture of resourceful, value-based innovation. This involves embedding both commercial and social principles into operational routines and investing in the capability of members to do more with less—a practice aligned with the frugal innovation ethos (Mishra, 2021). For example, cooperatives can achieve improved cold-chain logistics or sustainable fishing practices using low-cost, locally-sourced technologies such as solar-powered cooling boxes or seawater-fueled lamps (Basbeth, 2024). Ongoing training in cost-effective technologies and socially responsible practices will ensure that cooperatives fulfill their role as both economic and community-building institutions.

Second, the mediation role of CSV between frugal innovation and performance underscores CSV’s strategic function in cooperative business models. As emphasized by Porter and Kramer (2011), organizations that align economic objectives with societal improvement are better positioned for sustainable success. Cooperatives, therefore, should institutionalize shared value principles among their members—ensuring that knowledge dissemination, ethical operations, and community-oriented impact are woven into their day-to-day business processes.

Third, the moderating role of humanistic governance—where CSV’s impact on performance strengthens under high levels of democratic, inclusive governance—highlights the need for values-based leadership in cooperatives. This finding aligns with Pirson’s (2012) humanistic theory of the firm, which argues for placing dignity and stakeholder interest at the center of governance. Managers must adopt transparent, participatory approaches that engage members in decision-making and performance evaluations. Not only does this increase trust, but it also enables the cooperative to harness diverse perspectives, thereby improving its adaptive and innovative capacities. Cooperatives must actively communicate how governance systems affect outcomes to cultivate member support and long-term commitment.

Moreover, this study situates SSF cooperatives as a unique form of producer cooperatives, offering new insights into the role of frugal innovation as an antecedent of CSV—a perspective often overlooked in previous studies. Prior literature has frequently treated frugal innovation as a mediator or outcome, paying little attention to governance factors in evaluating cooperative performance. Our findings challenge this convention, offering evidence that governance, specifically humanistic governance, is not peripheral but central to understanding how cooperatives generate and sustain shared value.

The use of the Conditionally Mediated (CoMe) approach—integrating moderation and mediation analysis—provides a more sophisticated understanding of the interplay between innovation, governance, and performance (Sarstedt et al., 2020; Cheah et al., 2021). While many studies isolate moderating or mediating variables, this integrated method reflects the real-world complexity of cooperative management. It highlights that governance systems not only influence direct outcomes but also reshape how intermediate variables such as CSV transmit the impact of innovation on performance. As Singh et al. (2020) recommended, examining such interactions in varied regional contexts is vital for refining governance models in cooperatives. Our study answers this call by illustrating how democratic and humanistic governance conditions shape the effectiveness of frugal innovation strategies in Indonesian SSF cooperatives.

From a policy standpoint, the evidence presented in this study underscores the need for government agencies, fisheries authorities, and cooperative federations to integrate frugal innovation and CSV principles into official support programs. Policymakers could, for instance, design subsidy schemes or innovation grants that specifically reward cooperatives adopting low-cost sustainable technologies and community-driven business practices. Furthermore, embedding humanistic governance benchmarks—such as transparency, participatory decision-making, and inclusivity—into cooperative accreditation standards would ensure that state support is directed toward growth, equitable and responsible governance. This dual focus will strengthen the resilience

of SSF cooperatives, helping them become role models for sustainable resource-based enterprises in Indonesia.

At the managerial level, cooperative leaders should translate these findings into tangible governance and operational strategies. Beyond simply pursuing cost-efficiency, managers must institutionalize regular training, member-led innovation workshops, and inclusive evaluation forums where economic, social, and environmental outcomes are jointly assessed. Practical steps may include setting up participatory committees for resource allocation, introducing low-cost digital platforms for transparent reporting, and linking cooperative innovations with local community development goals. CSV and humanistic governance must be embedded into day-to-day practices, to not only boost cooperative performance but also uphold long-term legitimacy and trust among members, regulators, and society at large—ensuring that cooperatives thrive in increasingly competitive and sustainability-conscious markets.

CONCLUSION AND FURTHER STUDY

This study demonstrates that frugal innovation serves as a powerful catalyst for enhancing shared value creation (CSV), which in turn contributes significantly to cooperative performance. Crucially, humanistic governance strengthens this relationship by providing the ethical and participatory foundation necessary to guide innovation toward socially beneficial outcomes. In the context of small-scale fisheries (SSF) cooperatives—often constrained by limited financial and technical resources—CSV and humanistic governance together form a strategic pathway for achieving commercial success, community empowerment, and environmental responsibility. These findings affirm that CSV-based strategies, when implemented through inclusive and value-centered governance, are especially effective for cooperatives fulfilling a threefold mission in economically constrained environments.

Beyond SSF cooperatives, this study advocates for expanded inquiry into how various cooperative forms—such as producer, consumer, savings and loan, and service cooperatives—require differentiated governance approaches to optimize performance. Humanistic governance is not one-size-fits-all; rather, it must be adapted to the specific structural and cultural needs of each cooperative model. Future research should explore the dynamic interactions between governance structures, member participation, and innovation strategies to uncover contextually appropriate models of humanistic governance. Ultimately, this research contributes to a broader redefinition of cooperative success—not solely as profit generation, but as a harmonized pursuit of innovation, inclusion, and collective well-being.

ETHICAL DISCLOSURE

All participants provided written informed consent before participation. They were informed about the study's purpose, their voluntary participation, the right to withdraw at any time, and the confidentiality of their responses.

CONFLICT OF INTERESTS

The authors declare no conflict of interest.

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