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Different paths to organizational effectiveness in sport organizations: evidence from multi-group analysis across sport types

Diferentes caminos hacia la efectividad organizacional en organizaciones deportivas: evidencia de un análisis multigrupo entre tipos de deporte

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Abstract

This study examines whether the mechanisms that drive organizational effectiveness differ across types of sport organizations. While prior sport management research often assumes that governance dynamics are similar across sports, organizational processes may vary depending on sport characteristics. This research analyzes the relationships among leadership behavior, human resource management (HRM) practices, organizational communication, and organizational effectiveness across different sport categories. A quantitative approach using Partial Least Squares Structural Equation Modeling (PLS-SEM) combined with Multi-Group Analysis (MGA) was applied to data from 227 administrators, board members, managerial personnel, coaches, and athletes representing provincial and district-level sport organizations in East Java, Indonesia. The results reveal distinct organizational patterns across sport types. Significant differences emerged between measured sports and martial arts in the relationships between leadership, HRM practices, and organizational communication. Measured sports were characterized by an HRM-driven model, team sports by a communication-driven model, and martial arts by a leadership-driven model. These findings demonstrate that sport organizations are not homogeneous and that mechanisms leading to effectiveness vary across sport types. The study contributes to sport management literature by proposing a typology of sport organizations based on governance dynamics.

Keywords: sport organizations; organizational effectiveness; multi-group analysis; leadership behavior; organizational communication; hrn practices.

Resumen

Este estudio examina si los mecanismos que impulsan la efectividad organizacional difieren entre distintos tipos de organizaciones deportivas. Aunque la investigación previa en gestión del deporte suele asumir que las dinámicas de gobernanza son similares entre los diferentes deportes, los procesos organizacionales pueden variar según las características de cada disciplina. Esta investigación analiza las relaciones entre el comportamiento de liderazgo, las prácticas de gestión de recursos humanos (HRM), la comunicación organizacional y la efectividad organizacional en diferentes categorías deportivas. Se aplicó un enfoque cuantitativo utilizando el Modelado de Ecuaciones Estructurales basado en Mínimos Cuadrados Parciales (PLS-SEM), combinado con el Análisis Multigrupo (MGA), a datos de 227 administradores, miembros de juntas directivas, personal directivo, entrenadores y atletas pertenecientes a organizaciones deportivas de nivel provincial y distrital en Java Oriental, Indonesia. Los resultados revelan patrones organizacionales distintos según el tipo de deporte. Se observaron diferencias significativas entre los deportes medidos y las artes marciales en las relaciones entre el liderazgo, las prácticas de recursos humanos y la comunicación organizacional. Los deportes medidos se caracterizaron por un modelo impulsado por la gestión de recursos humanos, los deportes de equipo por un modelo impulsado por la comunicación y las artes marciales por un modelo impulsado por el liderazgo. Estos hallazgos demuestran que las organizaciones deportivas no son homogéneas y que los mecanismos que conducen a la efectividad varían según el tipo de deporte. El estudio contribuye a la



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literatura de gestión del deporte al proponer una tipología de organizaciones deportivas basada en las dinámicas de gobernanza.

Palabras clave: organizaciones deportivas; efectividad organizacional; análisis multigrupo; comportamiento de liderazgo; comunicación organizacional; gestión de recursos humanos

Introduction

Sport organizations operate in complex governance environments where they must coordinate multiple stakeholders, manage limited resources, and maintain both competitive performance and administrative accountability. Organizational effectiveness in sport therefore depends not only on athletic outcomes but also on internal governance mechanisms such as leadership, human resource management (HRM), and communication systems. Previous studies in sport management have emphasized the importance of these internal capacities in shaping organizational performance and sustainability (Bayle & Robinson, 2007; Wicker & Breuer, 2011; O'Boyle & Hassan, 2014; Misener & Doherty, 2009; Winand et al., 2013).

Leadership and HRM practices have long been considered key determinants of organizational effectiveness. Leadership provides strategic direction and decision-making authority, while HRM practices contribute to organizational capacity through recruitment, training, and performance management (Taylor & McGraw, 2006; Millar & Doherty, 2016; Doherty, 2013; Winand & Anagnostopoulos, 2017). In addition, organizational communication plays an essential role in coordinating activities, facilitating information exchange, and ensuring alignment between strategic objectives and operational implementation (Parent & Hoye, 2018; Misener & Doherty, 2013; Pedersen, Miloch & Laucella, 2007). However, much of the existing literature tends to examine these factors within a single organizational model, implicitly assuming that governance dynamics are similar across different types of sport organizations (Thompson et al., 2023; Dowling, 2025).

In reality, sport organizations differ considerably in terms of their structural and operational characteristics, which are shaped by the nature of the sport itself (Strittmatter et al., 2024). Different sport types impose distinct structural and coordination demands on organizations. For instance, sports that rely on individual performance and systematic training programs may require strong HRM systems to manage athlete development and

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evaluation. Team sports, by contrast, often depend heavily on coordination and interaction among multiple actors, making communication processes particularly critical. Meanwhile, sports characterized by hierarchical coaching structures and strong disciplinary traditions may rely more strongly on leadership authority. Despite these differences, empirical research rarely examines whether the mechanisms that drive organizational effectiveness differ across sport types.

To address this gap, this study examines whether the relationships among leadership behavior, HRM practices, organizational communication, and organizational effectiveness differ across categories of sport organizations. Using a Partial Least Squares Structural Equation Modeling (PLS-SEM) approach combined with Multi-Group Analysis (MGA), this research compares three categories of sports: measured sports, team sports, and martial arts. By identifying differences in structural relationships across these groups, this study contributes to the sport management literature by proposing distinct organizational models that characterize different sport contexts.

This study contributes to sport management literature by demonstrating that organizational effectiveness in sport organizations follows different governance mechanisms across sport types and by proposing a typology of HRM-driven, communication-driven, and leadership-driven organizational models.

Methods

Research design

This study employed a quantitative explanatory research design to examine differences in organizational mechanisms across sport types. The analysis focused on the relationships among leadership behavior, human resource management (HRM) practices, organizational communication, and organizational effectiveness. Partial Least Squares Structural Equation Modeling (PLS-SEM) was used as the main analytical approach because it is suitable for analyzing complex structural relationships and prediction-oriented models. To identify structural differences across sport categories, Multi-Group Analysis (MGA) was conducted.

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Sample and data collection

The study involved administrators and managerial staff from provincial and district-level sport organizations in East Java, Indonesia. These organizations operate within hybrid governance systems that combine professional management structures and volunteer involvement. Data were collected through structured questionnaires distributed both electronically and directly to organizational members. A total of 227 valid responses were included in the analysis. Participants comprised administrators, board members, managerial personnel, coaches, and athletes representing provincial and district-level sport organizations in East Java, Indonesia. Athletes were included because they actively participated in organizational activities and regularly interacted with organizational leaders, coaches, and management processes, enabling them to provide informed perceptions of leadership behavior, HRM practices, organizational communication, and organizational effectiveness. To facilitate the multi-group analysis, the sample was categorized into measured sports ($n = 98$), team sports ($n = 90$), and martial arts ($n = 39$). The sample distribution allowed meaningful comparisons of organizational mechanisms across the three sport categories.

For the purpose of the multi-group analysis, sport organizations were categorized into three groups based on sport characteristics: measured sports, team sports, and martial arts. This classification enabled the comparison of structural relationships across different sport contexts.

Measures

All constructs were measured using structured questionnaires adapted to the context of sport organizations. Leadership Behavior (LB) comprised consideration and initiating structure dimensions and was measured using a five-point frequency scale. HRM Practices (HRMP), including recruitment, training, performance management, and support systems, were assessed using a five-point applicability scale. Organizational Communication (OC), encompassing communication satisfaction and information exchange processes, and Organizational Effectiveness (OE), covering flexibility, productivity, information management, and workforce capability, were measured using five-point agreement scales. Reliability analysis indicated strong internal consistency



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across all constructs, with Cronbach's Alpha and Composite Reliability (ρ_c) values as follows: Leadership Behavior ($\alpha = 0.903$; CR = 0.953), HRM Practices ($\alpha = 0.930$; CR = 0.947), Organizational Communication ($\alpha = 0.964$; CR = 0.970), and Organizational Effectiveness ($\alpha = 0.968$; CR = 0.973). These values exceed the recommended threshold of 0.70, confirming satisfactory measurement reliability.

Data Analysis

Data were analyzed using SmartPLS 4 following the two-step approach commonly applied in PLS-SEM. First, the measurement model was evaluated by examining indicator reliability, internal consistency, convergent validity, and discriminant validity. Internal consistency was assessed using Cronbach's alpha and composite reliability, convergent validity was evaluated using average variance extracted (AVE), and discriminant validity was assessed using the heterotrait-monotrait ratio (HTMT). Second, the structural model was assessed by examining path coefficients and coefficients of determination (R^2).

To examine differences across sport types, Multi-Group Analysis (MGA) was conducted to compare structural relationships among the three sport categories. MGA allows researchers to identify whether the strength and direction of relationships between variables vary across groups, providing insights into potential differences in organizational mechanisms among sport types.

To assess whether the observed differences between groups were statistically significant, PLS Multi-Group Analysis (PLS-MGA) was performed using SmartPLS 4. Bootstrapping with 5,000 subsamples was employed to estimate path significance and group differences. Following Henseler et al. (2009), group differences were evaluated using two-tailed p-values, with values below 0.05 indicating significant differences in structural relationships across sport categories.

Results

Before evaluating the structural relationships, the measurement model was assessed to ensure the reliability and validity of the constructs. The evaluation included internal consistency, convergent validity, and discriminant validity. The results of the measurement model assessment are presented in Table 1.



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Table 1. Measurement Model Assessment

Construct	Cronbach's Alpha	Composite Reliability	AVE	HTMT
Leadership Behavior (LB)	0.903	0.953	0.911	< 0.90
Organizational Communication (OC)	0.964	0.970	0.799	< 0.85
HRM Practices (HRMP)	0.930	0.947	0.782	0.900*
Organizational Effectiveness (OE)	0.968	0.973	0.817	< 0.85

Table 1 presents the results of the measurement model assessment. All constructs demonstrated satisfactory internal consistency, with Cronbach's alpha and composite reliability values exceeding the recommended threshold of 0.70. In addition, all AVE values were above 0.50, confirming adequate convergent validity. Discriminant validity was also supported, with HTMT values remaining within acceptable thresholds, although the highest value was observed between LB and OC (HTMT = 0.900). Furthermore, the SRMR value of 0.047 indicated a good overall model fit.

Table 2. Descriptive Statistics of Study Variables Across Sport Types

Variable	Measured Sports (Mean)	Team Sports (Mean)	Martial Arts (Mean)
Leadership Behavior (LB)	4.104	4.024	4.448
Organizational Communication (OC)	4.183	4.182	4.561
HRM Practices (HRMP)	4.090	4.151	4.424
Organizational Effectiveness (OE)	4.285	4.296	4.568

Table 2 presents the descriptive statistics of the main variables across sport types. Martial arts organizations reported the highest mean values across all constructs, including leadership behavior, organizational communication, HRM practices, and organizational effectiveness. Measured and team sports showed relatively similar mean values across most variables.

Table 3. Multi-Group Analysis Results (Path Coefficients)

Structural Relationship	Measured Sports	Team Sports	Martial Arts
LB → OC	0.344	0.560	0.976
HRMP → OC	0.582	0.378	-0.200
OC → OE	0.197	0.486	0.754
LB → OE	0.264	0.027	0.117
HRMP → OE	0.457	0.252	-0.010

Table 3 presents the results of the multi-group analysis comparing structural relationships across sport types. The results reveal clear differences in organizational mechanisms across the three categories.



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In measured sports, HRM practices show the strongest influence on organizational effectiveness ($\beta = 0.457$), suggesting that organizational performance in these sports is primarily driven by structured HRM systems.

In team sports, organizational communication demonstrates the strongest effect on effectiveness ($\beta = 0.486$), highlighting the central role of communication processes in coordinating team-based sport organizations.

In martial arts organizations, leadership behavior strongly influences organizational communication ($\beta = 0.976$), and communication strongly affects effectiveness ($\beta = 0.754$). This pattern indicates that leadership plays a dominant role in shaping communication dynamics within martial arts organizations.

Table 4. Multi-Group Differences in Structural Relationships Across Sport Types

Structural Relationship	Measured vs Team	Measured vs Martial	Team vs Martial
LB $\rightarrow$ OC	0.216	0.632	0.416
HRMP $\rightarrow$ OC	0.204	0.782	0.578
OC $\rightarrow$ OE	0.289	0.557	0.268
LB $\rightarrow$ OE	0.237	0.147	0.090
HRMP $\rightarrow$ OE	0.205	0.467	0.215

*Note: Values represent differences in path coefficients between groups.

Table 4 presents the differences in path coefficients across sport categories. The comparison results indicate that several structural relationships vary substantially across sport types. The largest differences appear in the relationships between leadership behavior and organizational communication as well as between HRM practices and organizational effectiveness. These results further support the argument that sport organizations operate under different governance mechanisms depending on sport characteristics.

Table 5. PLS-MGA Results Across Sport Types

Structural Relationship	Measured vs Team	Measured vs Martial	Team vs Martial
LB $\rightarrow$ OC	0.184	0.045*	0.242
HRMP $\rightarrow$ OC	0.188	0.031*	0.184
OC $\rightarrow$ OE	0.316	0.130	0.492
LB $\rightarrow$ OE	0.311	0.629	0.761
HRMP $\rightarrow$ OE	0.465	0.290	0.514

Note: Values represent two-tailed p-values obtained from PLS-MGA. * $p < 0.05$.

Table 5 presents the PLS-MGA results across sport types. The analysis showed that significant differences emerged only between measured sports and martial arts. The effects of leadership behavior (LB) and HRM practices (HRMP) on organizational

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communication (OC) differed significantly between these groups, whereas the other structural relationships did not show significant differences. These findings suggest that variations across sport types are mainly reflected in how leadership and HRM practices shape communication processes within sport organizations.

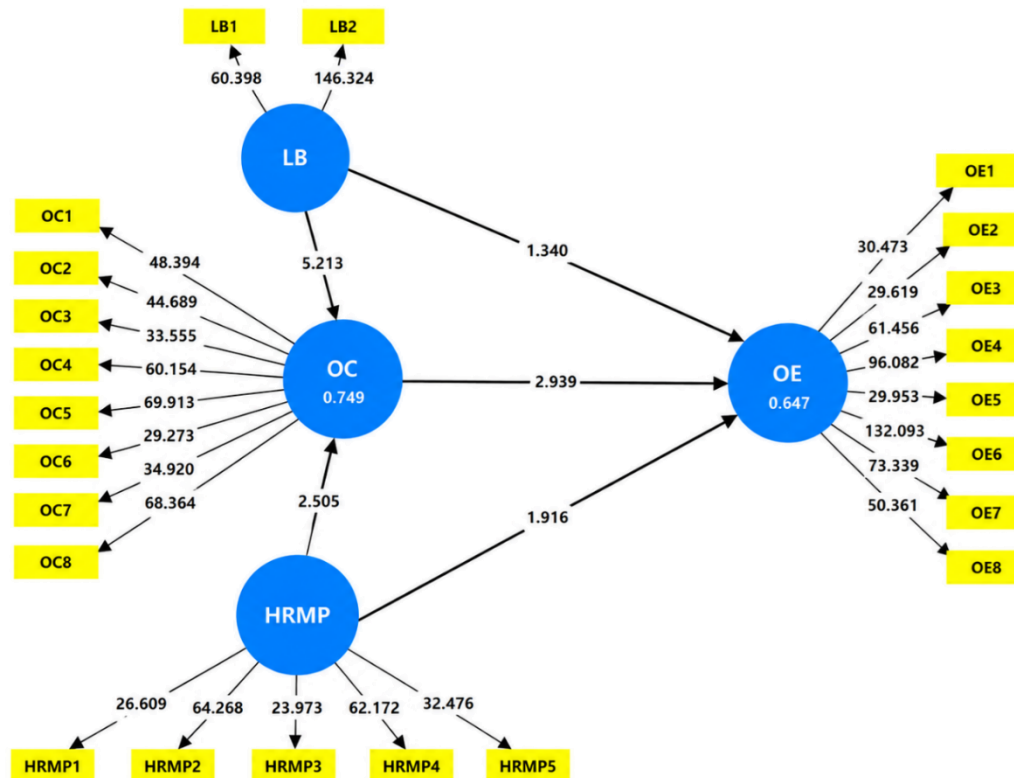


Figure 1. Structural Model with Standardized Path Coefficients and R² Values.

Figure 1 illustrates the structural relationships among leadership behavior (LB), HRM practices (HRMP), organizational communication (OC), and organizational effectiveness (OE). The model explains a substantial proportion of variance in the endogenous constructs, with $R^2 = 0.749$ for organizational communication and $R^2 = 0.647$ for organizational effectiveness. These results indicate that leadership behavior and HRM practices play an important role in shaping communication processes and organizational effectiveness in sport organizations.

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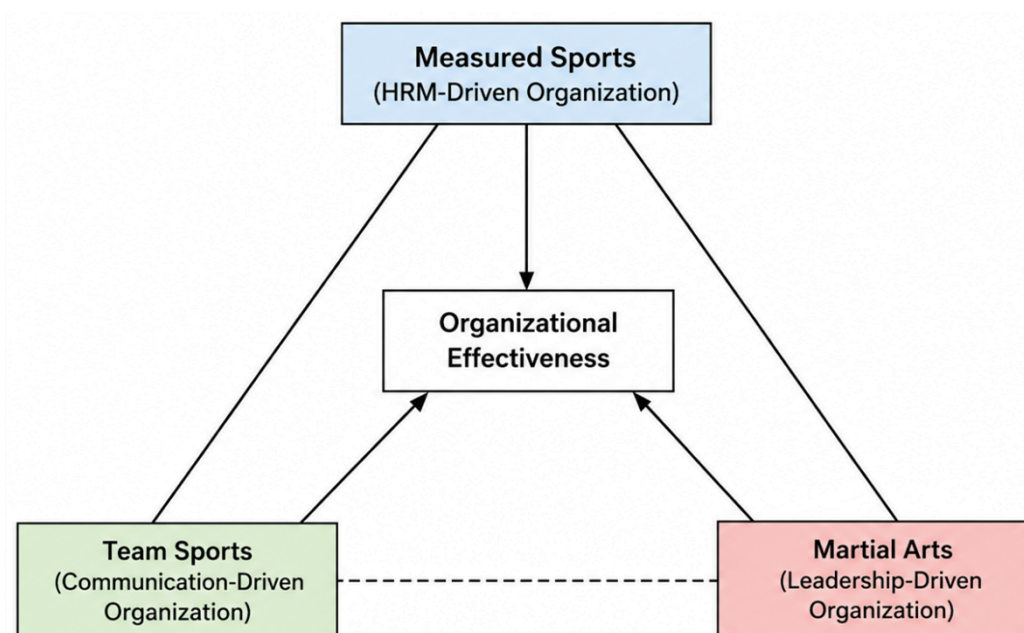


Figure 2. Typology of sport organizations based on dominant governance mechanisms.

The findings of this study suggest that sport organizations operate under different governance mechanisms depending on the characteristics of the sport. As illustrated in Figure 2, three organizational models can be identified: HRM-driven organizations in measured sports, communication-driven organizations in team sports, and leadership-driven organizations in martial arts. This typology highlights how different organizational mechanisms shape the effectiveness of sport organizations.

Discussion

Organizational mechanisms across sport types

This study examined whether the mechanisms that drive organizational effectiveness differ across sport types. The results of the multi-group analysis indicate that sport organizations do not operate under a single governance model. Instead, different sport contexts exhibit distinct organizational mechanisms linking leadership behavior, HRM practices, organizational communication, and organizational effectiveness.

Previous studies have suggested that governance structures and organizational processes in sport organizations are shaped by the contextual and structural characteristics of different sports (Bayle & Robinson, 2007; Shilbury & Ferkins, 2011; Thompson et al.,



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2023; Geeraert, 2021). For example, research on sport governance emphasizes that organizational performance in sport organizations is shaped by internal management capacities, leadership structures, and governance arrangements (Bayle & Robinson, 2007; Shilbury & Ferkins, 2011). Organizational effectiveness in sport therefore depends not only on athletic outcomes but also on internal governance mechanisms such as leadership, human resource management (HRM), and communication systems (Preuß et al., 2022). Similarly, studies of nonprofit sport organizations suggest that the effectiveness of sport organizations depends on how leadership, human resource management, and communication processes interact to support organizational coordination and performance (O'Boyle & Hassan, 2014; Misener & Doherty, 2013).

The findings of this study extend previous perspectives by showing that organizational mechanisms do not operate uniformly across sport contexts. Instead, different types of sport organizations exhibit distinct patterns in how leadership, HRM practices, and communication influence organizational effectiveness. This supports the view that sport organizations operate within diverse governance environments and that governance processes are context-dependent and shaped by sport-specific organizational structures and management practices (Winand et al., 2013; Girginov, 2023). Consequently, organizational effectiveness in sport organizations cannot be explained by a single governance mechanism.

Furthermore, the differences identified in this study highlight the importance of considering sport-specific contexts when examining organizational effectiveness in sport management research. Organizational processes that are effective in one sport context may not necessarily produce the same outcomes in other sport settings, particularly when structural characteristics of the sport differ (Dowling et al., 2014; Fahlén & Stenling, 2019).

HRM-Driven organizations in measured sports

HRM practices (HRMP) such as recruitment, training, and performance management contribute significantly to the development of organizational capability and effectiveness (Taylor & McGraw, 2006; Millar & Doherty, 2016; Zeimers & Léonard, 2025). This finding indicates that organizational performance in these sports is largely driven by structured human resource systems that support athlete development, performance



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monitoring, and long-term training programs. The results suggest that effective management of human resources plays a central role in coordinating training processes and organizational activities in measured sport contexts.

Previous studies have emphasized that HRM systems are critical for strengthening organizational capacity and improving performance in sport organizations. Research on nonprofit sport organizations highlights that HRM practices (HRMP) such as recruitment, training, and performance management contribute significantly to the development of organizational capability and effectiveness (Taylor & McGraw, 2006; Cuskelly et al., 2006; Millar & Doherty, 2016). In addition, HRM systems help organizations develop internal resources that support sustainable athlete development and long-term organizational performance (Nagel et al., 2025; Wicker & Breuer, 2012).

The findings of this study suggest that these HRM functions are particularly important in measured sports. These sports typically rely on objective performance indicators such as time, distance, or score, which require systematic monitoring and structured training programs. As a result, sport organizations operating in these contexts often depend on formalized HRM systems to coordinate coaching structures, athlete development pathways, and performance evaluation processes.

These results support previous research emphasizing the importance of organizational resources and management systems in nonprofit sport organizations (Wicker & Breuer, 2011; Winand & Hoeber, 2017). In measured sports, structured HRM practices appear to function as the primary organizational mechanism that supports coordination, performance monitoring, and long-term athlete development, thereby contributing directly to organizational effectiveness.

Communication-driven organizations in team sports

In contrast to measured sports, team sports demonstrate a different organizational pattern. The results show that organizational communication (OC) has the strongest influence on organizational effectiveness, indicating that communication processes play a central role in coordinating activities within team-based sport organizations. This suggests that effective communication systems are essential for managing interactions among organizational members and ensuring alignment in team sport environments.



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Previous research has emphasized the importance of communication in facilitating coordination, information exchange, and collaboration within organizations. In sport contexts, communication processes help support interaction among athletes, coaches, administrators, and other stakeholders involved in sport organizations (Pedersen et al., 2007; Girginov & Dowling, 2025). Effective communication systems enable organizations to share information efficiently, coordinate activities, and support decision-making processes that contribute to organizational effectiveness.

The importance of communication becomes particularly evident in team sports, where organizational activities involve multiple actors working simultaneously toward shared goals. In such environments, coordination among players, coaches, and management requires continuous information exchange and collaborative interaction. As a result, sport organizations operating in team sport contexts depend heavily on communication processes to maintain organizational alignment and operational effectiveness.

These findings are consistent with organizational theory perspectives that highlight communication as a central mechanism for coordinating complex organizational systems (Slack & Parent, 2006; Robbins & Judge, 2017). Previous research in sport management also demonstrates that effective communication systems contribute to organizational coordination, stakeholder alignment, and overall organizational effectiveness in sport organizations (Hoye et al., 2015; Thompson & Parent, 2021). Taken together, these results suggest that team sport organizations tend to operate under a communication-driven organizational model in which communication processes function as the primary mechanism supporting organizational effectiveness.

Leadership-driven organizations in martial arts

A different pattern emerges in martial arts organizations, where leadership behavior (LB) strongly influences organizational communication (OC). The results indicate that leadership plays a central role in shaping communication processes and organizational dynamics within martial arts contexts. The very strong relationship between leadership behavior and organizational communication suggests that leadership functions as a key

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mechanism through which organizational activities are coordinated and directed in these organizations.

Leadership theory emphasizes that leaders influence organizational processes by shaping communication structures, decision-making systems, and organizational culture (Northouse, 2019; Yukl, 2013). In organizational settings, leadership behavior provides direction and facilitates coordination among organizational members. Within sport organizations, leadership structures often influence governance arrangements, formal decision-making processes, and internal management systems (Piggott & Matthews, 2021). Recent studies have emphasized that leadership extends beyond formal authority and plays an important role in shaping governance processes, interpersonal interactions, and organizational culture within sport organizations (Booth, 2022).

These dynamics appear particularly evident in martial arts organizations. Many martial arts institutions operate within hierarchical structures characterized by strong traditions of authority, discipline, and respect for leadership roles. In such contexts, leaders such as head coaches or senior instructors often function as central decision-makers who guide organizational direction and shape communication patterns within the organization. As a result, communication processes within these organizations are strongly influenced by leadership behavior.

Similar patterns have been identified in sport governance research, where leadership authority plays a significant role in shaping organizational structures and governance processes (Byers et al., 2015; Shilbury et al., 2013). The findings of this study therefore suggest that martial arts organizations tend to operate under a leadership-driven organizational model, in which leadership behavior functions as the primary mechanism shaping communication processes and ultimately influencing organizational effectiveness.

Theoretical implications

The findings of this study contribute to sport management literature by demonstrating that sport organizations cannot be treated as homogeneous entities. Instead, the mechanisms linking leadership behavior (LB), HRM practices (HRMP), organizational communication (OC), and organizational effectiveness (OE) vary depending on the structural characteristics of different sports. These results highlight that organizational

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effectiveness in sport organizations emerges through distinct governance dynamics rather than through a single universal organizational mechanism.

Based on these findings, this study proposes a typology of sport organizations characterized by three dominant governance models: HRM-driven organizations, communication-driven organizations, and leadership-driven organizations. In measured sports, organizational effectiveness appears to be primarily supported by structured human resource management systems. In team sports, communication processes function as the central mechanism for coordinating complex organizational interactions. Meanwhile, in martial arts organizations, leadership behavior plays a dominant role in shaping communication structures and organizational processes.

This typology extends existing sport governance literature by highlighting how different organizational mechanisms operate across sport contexts (Bayle & Robinson, 2007; Shilbury & Ferkins, 2011; Winand & Anagnostopoulos, 2017). Rather than assuming that governance processes function similarly across all sport organizations, the findings of this study demonstrate that governance dynamics are shaped by the structural and organizational characteristics of each sport.

Understanding these differences is important for both researchers and practitioners. Governance structures and management practices that are effective in one sport context may not necessarily produce similar outcomes in other sport environments. Therefore, sport administrators and governing bodies should consider sport-specific organizational characteristics when designing governance systems and management strategies. Future research may further explore how these organizational models evolve across different governance systems and institutional environments in sport organizations (Fahlén & Stenling, 2019). Building on these insights, this study contributes to sport management literature by proposing a typology of sport organizations based on dominant governance mechanisms, distinguishing HRM-driven, communication-driven, and leadership-driven organizational models.

Conclusion

This study examined whether the mechanisms linking leadership behavior (LB), HRM practices (HRMP), organizational communication (OC), and organizational effectiveness (OE) differ across sport types. Using Multi-Group Analysis within a PLS-



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SEM framework, the results reveal that sport organizations operate under distinct governance mechanisms depending on the characteristics of the sport. In measured sports, HRM practices represent the primary driver of organizational effectiveness, indicating an HRM-driven organizational model. In team sports, organizational communication plays the most influential role, reflecting a communication-driven organizational model. In martial arts organizations, leadership behavior strongly shapes communication processes, suggesting a leadership-driven organizational structure.

These findings contribute to sport management literature by demonstrating that sport organizations are not homogeneous and that different sport contexts require different organizational mechanisms to achieve effectiveness. The study proposes a typology of sport organizations consisting of HRM-driven, communication-driven, and leadership-driven models. From a practical perspective, the findings suggest that sport administrators and governing bodies should adapt governance strategies according to the characteristics of each sport. Future research may further explore how these organizational models operate across different institutional settings and levels of sport governance.

References

- Admit, D. G. (2024). Sport organizations leadership, governance and its challenges: Systematic review. *Indonesian Journal of Sport Management*, 4(3).<https://doi.org/10.31949/ijsm.v4i3.9624>
- Anagnostopoulos, C., Byers, T., & Shilbury, D. (2014). Corporate social responsibility in professional team sport organisations: Towards a theory of decision-making. *European Sport Management Quarterly*, 14, 259–281.<https://doi.org/10.1080/16184742.2014.897736>
- Barnhill, C. R., Smith, N. L., & Oja, B. D. (2021). Organizational change. In *Organizational behavior in sport management*. Palgrave Macmillan.https://doi.org/10.1007/978-3-030-67612-4_8
- Bayle, E., & Robinson, L. (2007). A framework for understanding the performance of national governing bodies of sport. *European Sport Management Quarterly*, 7(3), 249-268.<https://doi.org/10.1080/16184740701511037>



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<https://doi.org/10.55040/4jjyys36>

- Booth, J. (2022). Authentic leadership and everyday leadership as a model for gender equity in sport governance and leadership. In P. Velija & L. Piggott (Eds.), *Gender equity in UK sport leadership and governance* (pp. 179–196). Emerald Publishing Limited. <https://doi.org/10.1108/978-1-80043-206-220221011>
- Byers, T., Anagnostopoulos, C., & Brooke-Holmes, G. (2015). Understanding control in nonprofit organisations: Moving governance research forward. *Corporate Governance*, 15(1), 134-145. <https://doi.org/10.1108/CG-06-2014-0072>
- Chelladurai, P. (2014). *Managing organizations for sport and physical activity: A systems perspective* (4th ed.). Routledge. <https://doi.org/10.4324/9781315213286>
- Cuskelly, G., Taylor, T., Hoyer, R., & Darcy, S. (2006). Volunteer management practices and volunteer retention: A human resource management approach. *Sport Management Review*, 9(2), 141-163. [https://doi.org/10.1016/S1441-3523\(06\)70023-7](https://doi.org/10.1016/S1441-3523(06)70023-7)
- Daft, R. L. (2016). *Organization theory and design* (12th ed.). Cengage Learning.
- Dowling, M., Edwards, J., & Washington, M. (2014). Understanding the concept of professionalisation in sport management research. *Sport Management Review*, 17(4), 520-529. <https://doi.org/10.1016/j.smr.2014.02.003>
- Dowling, M. (2025). "3: Sport governance codes as social and cultural norms". In *Handbook on Sport and Culture*. Cheltenham, UK: Edward Elgar Publishing. Retrieved Mar 12, 2026, from <https://doi.org/10.4337/9781035339983.00009>
- Fahlén, J., & Stenling, C. (2019). (Re)conceptualizing institutional change in sport management contexts: The unintended consequences of sport organizations' everyday organizational life. *European Sport Management Quarterly*, 19(2), 265-285. <https://doi.org/10.1080/16184742.2018.1516795>
- Geeraert, A. (2021). Indicators of good governance in sport organisations. In A. Geeraert (Ed.), *Good governance in sport*. Routledge.
- Girginov, V., & Dowling, M. (2025). *Management of Sports Development* (2nd ed.). Routledge. <https://doi.org/10.4324/9781003510260>
- Girginov, V. (2023). The numbers game: Quantifying good governance in sport. *European Sport Management Quarterly*, 23(6), 1577–1587. <https://doi.org/10.1080/16184742.2022.2078851>



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evidence from multi-group analysis across sport types. Vol. 12, n. ° 4; p. 1-20, August 2026.

<https://doi.org/10.55040/4jjyys36>

- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In R. R. Sinkovics & P. N. Ghauri (Eds.), *Advances in International Marketing* (Vol. 20, pp. 277–319). Emerald Group Publishing Limited. [https://doi.org/10.1108/S1474-7979\(2009\)0000020014](https://doi.org/10.1108/S1474-7979(2009)0000020014)
- Hoye, R., Smith, A. C. T., Nicholson, M., & Stewart, B. (2015). *Sport management: Principles and applications* (4th ed.). Routledge. <https://doi.org/10.4324/9781315733371>
- Millar, P., & Doherty, A. (2016). Capacity building in nonprofit sport organizations: Development of a process model. *Sport Management Review*, 19(4), 365-377. <https://doi.org/10.1016/j.smr.2016.01.002>
- Misener, K., & Doherty, A. (2009). A case study of organizational capacity in nonprofit community sport. *Journal of Sport Management*, 23(4), 457-482. <https://doi.org/10.1123/jsm.23.4.457>
- Misener, K., & Doherty, A. (2013). Understanding capacity through the processes and practices of nonprofit sport organizations. *Sport Management Review*, 16(3), 214-227. <https://doi.org/10.1016/j.smr.2012.07.003>
- Nagel, S., Ehnold, P., & Schlesinger, T. (2025). Human resource management in non-profit sport organizations. <https://doi.org/10.4337/9781035333141.00016>
- Northouse, P. G. (2019). *Leadership: Theory and practice* (8th ed.). Sage Publications.
- O'Boyle, I., & Hassan, D. (2014). Performance management and measurement in national-level nonprofit sport organisations. *European Sport Management Quarterly*, 14(3), 299-314. <https://doi.org/10.1080/16184742.2014.898677>
- O'Boyle, I., Murray, D., & Cummins, P. (2015). *Leadership in sport*. Routledge. <https://doi.org/10.4324/9781315745374>
- Parent, M., O'Brien, D., & Slack, T. (2012). Organisation theory and sport management. In L. Trenberth & D. Hassan (Eds.), *Managing sport business* (pp. 99–120). Routledge.
- Pedersen, P. M., Miloch, K. S., & Laucella, P. C. (2007). *Strategic sport communication*. Human Kinetics.



Original article. Different paths to organizational effectiveness in sport organizations: evidence from multi-group analysis across sport types. Vol. 12, n. ° 4; p. 1-20, August 2026.

<https://doi.org/10.55040/4jjyys36>

- Piggott, L. V., & Matthews, J. J. (2021). Gender, Leadership, and Governance in English National Governing Bodies of Sport: Formal Structures, Rules, and Processes. *Journal of Sport Management*, 35(4), 338-351. Retrieved Jun 20, 2026, from <https://doi.org/10.1123/jsm.2020-0173>
- Preuß, H., Schallhorn, C., & Schütte, N. (2022). Olympic Sport Organisations in Times of Crisis and Change: Guide for Strategic Management and Good Governance. Baden-Baden: Nomos. <https://doi.org/10.5771/9783985720644>
- Robbins, S. P., & Judge, T. A. (2017). *Organizational behavior* (17th ed.). Pearson.
- Sarstedt, M., Ringle, C. M., & Hair, J. F. (2017). Partial least squares structural equation modeling. In C. Homburg et al. (Eds.), *Handbook of market research*. Springer. https://doi.org/10.1007/978-3-319-05542-8_15-1
- Shilbury, D., & Ferkins, L. (2011). Professionalisation, sport governance and strategic capability. *Managing Leisure*, 16(2), 108-127. <https://doi.org/10.1080/13606719.2011.559090>
- Shilbury, D., Ferkins, L., & Smythe, L. (2013). Sport governance encounters: Insights from lived experiences. *Sport Management Review*, 16(3), 349-363. <https://doi.org/10.1016/j.smr.2012.12.001>
- Slack, T., & Parent, M. M. (2006). *Understanding sport organizations: The application of organization theory* (2nd ed.). Human Kinetics.
- Strittmatter, A.M., Skille, E. Å., Stenling, C., & Fahlén, J. (2024). Structural and Cultural Othering: An Organizational Culture Perspective on Young People's Participation in Decision-making in Sport Organizations. *YOUNG*, 32(4), 360-377. <https://doi.org/10.1177/11033088241237386>
- Taylor, T., & McGraw, P. (2006). Exploring human resource management practices in nonprofit sport organisations. *Sport Management Review*, 9(3), 229-251. [https://doi.org/10.1016/S1441-3523\(06\)70027-4](https://doi.org/10.1016/S1441-3523(06)70027-4)
- Thompson, A., & Parent, M. M. (2021). Understanding the impact of radical change on the effectiveness of national-level sport organizations. *Sport Management Review*, 24(1), 1-23. <https://doi.org/10.1016/j.smr.2020.04.005>



Original article. Different paths to organizational effectiveness in sport organizations: evidence from multi-group analysis across sport types. Vol. 12, n. ° 4; p. 1-20, August 2026.
<https://doi.org/10.55040/4jjyys36>

- Thompson, A., Lachance, E. L., Parent, M. M., & Hoye, R. (2023). A systematic review of governance principles in sport. *European Sport Management Quarterly*, 23(6), 1863-1888. <https://doi.org/10.1080/16184742.2022.2077795>
- Wicker, P., & Breuer, C. (2011). Scarcity of resources in German non-profit sport clubs. *Sport Management Review*, 14(2), 188-201. <https://doi.org/10.1016/j.smr.2010.09.001>
- Wicker, P., & Breuer, C. (2012). Understanding the importance of organizational resources to explain organizational problems. *Voluntas*, 24, 461-484. <https://doi.org/10.1007/s11266-012-9272-2>
- Winand, M., & Anagnostopoulos, C. (2017). Get ready to innovate! Staff's disposition to implement service innovation in non-profit sport organisations. *International Journal of Sport Policy and Politics*, 9(4), 579-595. <https://doi.org/10.1080/19406940.2017.1308418>
- Winand, M., & Hoeber, L. (2017). Innovation capability of non-profit sport organizations. In *Sport entrepreneurship and innovation* (pp. 13–30).
- Winand, M., Vos, S. B., Zintz, T., & Scheerder, J. (2013). Determinants of service innovation: A typology of sport federations. *International Journal of Sport Management and Marketing*, 13(1-2), 55-73. <https://doi.org/10.1504/IJSMM.2013.055194>
- Yukl, G. (2013). *Leadership in organizations* (8th ed.). Pearson Education.
- Zeimers, G., & Léonard, P. (2025). "3: The social responsibility of nonprofit sport organizations: a rapid literature review". In *Research Handbook on Corporate Social Responsibility in Sport*. Cheltenham, UK: Edward Elgar Publishing. Retrieved Mar 12, 2026, from <https://doi.org/10.4337/9781803926476.00011>