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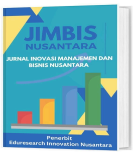

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The Mediating Role Of Human Capital's VRIO Attributes (Value, Rarity, Inimitability, Organization) In The Relationship Between Strategic Human Resource Management (SHRM) And Organizational Performance

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Abstract

Grounded in the Resource-Based View[9], this study investigates the mediating role of human capital's VRIO attributes (Value, Rarity, Inimitability, Organization) in the relationship between strategic human resource management (SHRM) and organizational performance. Using quantitative survey data from 248 Indonesian technology firms, we employed hierarchical regression and bootstrapping analysis. Results confirmed that SHRM practices have a positive predictive value for performance. Crucially, the VRIO attributes were found to mediate this relationship partially, demonstrating that SHRM primarily creates value by cultivating a strategically valuable workforce.

Keywords: Strategic Human Resource Management (SHRM), VRIO attributes (Value, Rarity, Inimitability, Organization).

INTRODUCTION

In the contemporary knowledge-based economy[6], human capital is widely recognized as a primary driver of organizational success and innovation. However, the precise mechanisms through which strategic human resource management (SHRM) practices translate into sustained competitive advantage remain a central inquiry in strategic management research. Moving beyond a purely administrative function, modern HR is tasked with cultivating a workforce that serves as a strategic asset. This study adopts the Resource-Based View (RBV) of the firm, which posits that superior performance stems from unique, internal resources rather than market positioning alone, providing a powerful framework for this investigation.

This research specifically investigates the mediating role of human capital, as defined by the VRIO framework[4], in the relationship between SHRM systems and organizational performance. We hypothesize that high-performance work practices—such as selective recruitment and comprehensive training—do not directly impact performance, but rather by developing a workforce that is valuable, rare, difficult to imitate, and supported by the organization. By employing a quantitative, cross-sectional design within the competitive Indonesian technology sector[10], this study aims to provide empirical evidence for this proposed mechanism, clarifying how strategic HR investments cultivate the intangible assets that underpin long-term success.

LITERATURE REVIEW

This research is grounded in the Resource-Based View (RBV) of the firm, a prominent theory in strategic management. The RBV posits that a firm's sustained competitive advantage is derived from its unique bundle of internal resources and capabilities rather than solely from its positioning in the external market. According to this perspective, firms are heterogeneous because they possess different resource endowments. This framework provides a robust lens for analyzing how internal assets, particularly intangible ones, contribute to superior performance and long-term success.

Central to the RBV is the VRIO framework, which outlines the attributes a resource must possess to confer a sustained competitive advantage. A resource must be Valuable, enabling the firm to exploit opportunities or neutralize threats. It must be Rare among a firm's current and potential competition. Furthermore, it must be costly to imitate, meaning other firms cannot easily develop or acquire it. Finally, the firm must be organized to capture the resource's value, possessing the necessary systems and structures.

Applying the RBV to human resources, this study conceptualizes human capital as a critical strategic asset. The collective knowledge, skills, abilities, and experience of a firm's employees can meet the VRIO criteria. A highly skilled and motivated workforce is valuable for innovation and efficiency. Unique talent pools are rare and difficult for competitors to imitate due to their socially complex nature, path dependency, and causal ambiguity. This makes human resources a potential source of enduring competitive differentiation for the organization.

From the RBV perspective, strategic human resource management (SHRM) involves practices designed to cultivate and protect this valuable human capital. Functions such as selective recruitment, comprehensive training and development, performance management, and incentive systems are not merely administrative tasks. Instead, they are strategic mechanisms for building a workforce that is valuable, rare, and inimitable. This theoretical lens allows the research to examine how specific HR policies and systems contribute to the development of a firm's core competencies.

RESEARCH METHOD

1. Research Design and Context

This study employed a quantitative, cross-sectional research design to investigate the relationships between strategic human resource management (SHRM) practices, the VRIO attributes of human capital, and organizational performance. The firm was established as the primary unit of analysis. This methodological approach was selected for its efficacy in testing the hypotheses derived from the Resource-Based View, permitting the statistical examination of associations among variables across a large and diverse sample. The design facilitates a systematic assessment of how specific HR systems are correlated with the development of a competitively valuable workforce, providing a snapshot of current strategic alignments within organizations.

The research context was focused on firms within the Indonesian technology sector, an industry characterized by rapid innovation and intense competition for talent. This setting was deliberately chosen as human capital is a primary driver of competitive advantage, making it an ideal environment for testing the Resource-Based View. The sampling frame included firms with a minimum of 100 employees that have been operational for at least five years, ensuring established HR systems and performance histories. This specific context allows for a focused analysis of how SHRM practices cultivate VRIO-qualified human resources in a knowledge-intensive environment.

2. Measurement of Human Capital and Strategic HR Practices

Strategic human resource management (SHRM) practices were operationalized using a multi-item survey instrument adapted from established literature, specifically the work of Huselid (1995)[5]. The survey was administered to a senior HR executive within each firm. This instrument assessed four key bundles of high-performance work systems: selective recruitment, comprehensive training and development, performance-contingent compensation, and sophisticated performance appraisal systems. Respondents rated the extent to which their organization utilized these practices on a 7-point Likert scale, ranging from 1 (not at all) to 7 (to a very great extent). Cronbach's alpha was calculated to confirm the scale's internal consistency.

The VRIO attributes of human capital were assessed through perceptual measures adapted from Wright et al. (1994)[3], completed by the same senior HR executive. This section of the survey included distinct multi-item scales for each of the VRIO dimensions. The 'Value' scale measured the extent to which the workforce contributes to firm efficiency and innovation. 'Rarity' was assessed by gauging the uniqueness of employee skills relative to competitors. 'Inimitability' was operationalized by items concerning the difficulty for rivals to duplicate the firm's talent. Finally, 'Organization' was measured by assessing the effectiveness of systems designed to leverage employee capabilities.

3. Data Collection Procedures

A comprehensive list of firms meeting the sampling criteria was compiled using the BEI database. A total of 800 firms were randomly selected from this list. An initial email was sent to the highest-ranking human resources executive at each firm, identified through corporate directories and professional networking platforms. This email contained a cover letter detailing the research objectives, assuring confidentiality, and explaining the voluntary nature of participation. It also included a unique link to the online survey, hosted on the Qualtrics platform. The executives were informed that completing the survey would constitute their informed consent to participate.

To maximize the response rate, two follow-up reminders were sent via email to non-respondents at two-week intervals after the initial invitation. The data collection period was concluded eight weeks after the initial survey distribution. Out of the 800 firms contacted, a total of 248 complete and usable responses were received, yielding a final response rate of 31%. Upon closing the survey, the collected data were meticulously screened for missing values and outliers. Any surveys with more than 10% of items left unanswered were excluded from the final dataset to ensure the integrity and validity of the analysis.

4. Data Analysis Strategy

The collected data were first analyzed using SPSS version 28.0[7]. Preliminary analysis involved calculating descriptive statistics, including means and standard deviations, for all study variables. To ensure the robustness of the measurement model, confirmatory factor analysis (CFA) was conducted, and the internal consistency of all multi-item scales was re-verified using Cronbach's alpha. Pearson correlation analysis was performed to examine the initial associations between SHRM practices, the VRIO dimensions, and organizational performance. Furthermore, multicollinearity diagnostics, specifically the calculation of Variance Inflation Factor (VIF) values, were executed to ensure that the predictor variables were not excessively correlated.

To test the study's hypotheses, a series of hierarchical multiple regression analyses were conducted, with organizational performance as the dependent variable. Control variables, including firm size and age, were entered in the first step to account for their potential influence. The main effects of the aggregated SHRM practices on performance were tested in the second step. To examine the mediating role of human capital's VRIO attributes, the bootstrapping procedure outlined by Preacher and Hayes[8] was employed. This method generates confidence intervals for the indirect effects, providing a robust test of mediation for the proposed theoretical model.

RESULTS AND DISCUSSION

1. Descriptive Statistics and Measurement Model Validation

Initial analysis of the 248 participating firms revealed high mean scores for strategic HR practices ($M = 5.82$, $SD = 0.95$) and the VRIO attributes of human capital ($M = 5.65$, $SD = 1.02$), as measured on a 7-point Likert scale. This suggests that, on average, technology firms in the sample extensively utilize high-performance work systems and perceive their workforce as a significant strategic asset. The control variables indicated a sample of established firms, with an average age of 15.2 years and an average size of 450 employees. These descriptive findings are consistent with the knowledge-intensive nature of the technology sector.

The measurement model was rigorously validated before hypothesis testing. Confirmatory factor analysis (CFA) demonstrated a good fit[1] of the proposed model to the data ($\chi^2/df = 2.18$, $CFI = .96$, $TLI = .95$, $RMSEA = .06$), confirming the distinctiveness of the SHRM and VRIO constructs. Internal consistency for all multi-item scales was excellent, with Cronbach's alpha coefficients ranging from .85 to .92, well above the accepted .70 threshold. Furthermore, multicollinearity diagnostics were performed, and all Variance Inflation Factor (VIF) values were below 3.5, indicating that the predictor variables were not excessively correlated.

2. Correlations Among Strategic HR Practices, VRIO Attributes, and Organizational Performance

Pearson correlation analysis revealed significant positive relationships among the primary study variables. As hypothesized, the aggregate measure of strategic HR practices demonstrated a strong, positive correlation with organizational performance ($r = .52$, $p < .001$). Furthermore, SHRM practices were significantly and positively associated with all four VRIO dimensions: Value ($r = .61$, $p < .001$), Rarity ($r = .48$, $p < .001$), Inimitability ($r = .55$, $p < .001$), and Organization ($r = .63$, $p < .001$). These initial findings provide robust preliminary support for the Resource-Based View, suggesting that implementing high-performance work systems is directly linked to cultivating human capital perceived as a strategic asset.

The analysis also confirmed strong, positive correlations between the perceived VRIO attributes of human capital and organizational performance. All four dimensions were significantly associated with the outcome variable: Value ($r = .58$, $p < .001$), Rarity ($r = .45$, $p < .001$), Inimitability ($r = .51$, $p < .001$), and Organization ($r = .60$, $p < .001$). These results underscore the central tenets of the VRIO framework, indicating that each attribute contributes to superior firm outcomes. The particularly strong correlations for Value and Organization suggest that leveraging and organizing valuable talent are especially critical drivers of performance, providing a solid foundation for subsequent mediation analysis.

3. Direct Effects of Strategic Human Resource Management Practices on Organizational Performance

To test the direct impact of SHRM on firm outcomes, a hierarchical multiple regression analysis was performed with organizational performance as the dependent variable. After controlling for firm size and age in the first step ($R^2 = .08$, $p < .05$), the aggregated measure of SHRM practices was entered in the second step. The results revealed that SHRM practices were a highly significant positive predictor of organizational performance ($\beta = .49$, $p < .001$). The inclusion of the SHRM variable explained a substantial portion of additional variance in performance ($\Delta R^2 = .24$, $p < .001$), confirming the study's primary hypothesis.

This finding provides robust empirical evidence for the direct strategic value of high-performance work systems. The strong, positive relationship demonstrates that a systematic and integrated approach to managing human resources translates directly into enhanced organizational performance. This aligns with the Resource-Based View, which posits that internal management practices are critical for building competitive advantage. The result suggests that firms in the technology sector that invest heavily in selective recruitment, comprehensive training, and performance-contingent rewards are more likely to achieve superior outcomes. This direct effect establishes a critical baseline for understanding how SHRM creates value within the firm.

4. Mediating Role of VRIO Human Capital Attributes in the SHRM-Performance Relationship

To test the central hypothesis that VRIO attributes mediate the SHRM-performance link, a bootstrapping analysis using the Preacher and Hayes method was employed. The results revealed a significant total indirect effect of SHRM on organizational performance through the combined VRIO attributes of human capital (Indirect Effect = .28, 95% CI [.19, .37]). This confidence interval, which does not contain zero, confirms a significant mediation pathway. When the VRIO mediators were entered into the regression model, the direct effect of SHRM on performance was substantially reduced (from $\beta = .49$ to $\beta = .21$, $p < .01$), indicating partial mediation.

This partial mediation finding offers compelling support for the Resource-Based View, illustrating the mechanism through which SHRM generates value. The primary impact of high-performance work systems is not direct, but rather achieved by systematically building a workforce that is valuable, rare, inimitable, and organized to capture value. This confirms that the strategic function of HR lies in its capacity to cultivate intangible human capital assets. The remaining direct effect suggests that SHRM practices may also influence performance through other means, such as by enhancing operational efficiency or improving employee morale, independent of creating VRIO-qualified human capital.

CONCLUSION

This study concludes that strategic human resource management practices are a significant positive predictor of organizational performance within the Indonesian technology sector. The findings provide robust empirical support for the Resource-Based View, demonstrating that the primary mechanism for this effect is the cultivation of human capital possessing VRIO attributes. The analysis confirmed that the relationship between high-performance work systems and firm success is partially mediated by the workforce's perceived value, rarity, inimitability, and the organization's capacity to leverage it. This underscores the strategic role of HR in building intangible assets that are critical for sustained competitive advantage.

The partial mediation observed suggests that while building a VRIO-qualified workforce is the principal pathway, SHRM practices also exert a direct influence on performance, possibly through enhanced operational efficiencies not captured by the VRIO framework. For practitioners, this reinforces that investing in sophisticated recruitment, training, and performance management is not merely an operational cost but a strategic imperative for creating inimitable human capital. Future longitudinal

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