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Article

The Role of Intangible Resources in Driving Value Creation and Sustained Competitive Advantage for Businesses

STAN Sebastian-Emanuel[1,*] ȚÎȚU Mihai Aurel and PARASCHIV Cristian[3]

[1]Nicolae Balcescu Land Forces Academy of Sibiu, Romania; sebastian.stan@armyacademy.ro; https://orcid.org/0000-0002-6725-6356

[2]Lucian Blaga University of Sibiu, Romania; Academy of Romanian Scientists, Bucharest, Romania; mihail.titu@ulbsibiu.ro; https://orcid.org/0000-0002-0054-6535

[3]Lucian Blaga University of Sibiu, Romania; cristian.paraschiv@ulbsibiu.ro

[*] Correspondence: sebastian.stan@armyacademy.ro

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Abstract*: This research investigates the role of intangible resources in fostering and sustaining competitive advantages within firms. The study surveyed 284 managers and CEOs from a diverse array of companies, collecting data via a structured questionnaire. The collected data were then analyzed using multiple linear regression techniques implemented through SPSS software. The findings underscore the pivotal role of intangible resources in creating and maintaining a competitive edge. These resources were found to be critical in value creation processes that drive long-term strategic advantages. The study's conclusions emphasize that firms focusing on the development and strategic management of intangible assets can achieve and sustain superior performance in their respective markets. This research adds to the growing body of literature by empirically validating the significance of intangible resources in competitive strategy and offers practical implications for managers aiming to leverage these assets for sustained competitive success.*

Keywords*: intangible resources; value; competitive; value creation advantage*

1. Introduction

Organizational resources play a crucial role in determining the competitive advantage and success of an organization. A strategic alignment and effective utilization of resources are essential for organizational success and sustainability (Bucur, 2023; Gorski et al., 2023). Recently, there has been a significant change in the corporate landscape, as organizations are placing greater emphasis on intangible assets like expertise, innovation capacity, and brand reputation to generate value. Historically, there has been a prevailing belief that tangible resources, including physical assets and equipment, play a central role in generating value (Barney, 1991). Financial resources are also emphasized for their impact on organizational performance, with the expectation that increased funding should enhance overall performance (Radoiu, Batusaru, 2022).

However, recent studies have emphasized the crucial significance of intangible resources in influencing the competitive advantage of organizations (Barney, 1991; Hitt et al., 2001; Shen et al., 2023). Intangible resources, as defined by the (CFI Team, 2022), are assets that lack physical form yet have significant value for a firm. It is possible to categorize these elements into two distinct types: identifiable and non-identifiable. Companies possess identifiable intangible assets, which are distinct from other assets and may be readily sold. Distinct intangible assets including patents, trademarks, copyrights, and customer

lists. Conversely, non-identifiable intangible assets are inseparable from other assets and pose challenges in terms of their valuation.

Human resources are highlighted as the most important asset, contributing significantly to organizational efficiency and competitiveness (Yamin et al., 2024). Investing in training employees is essential for organizational growth and competitiveness, as well-trained, creative, and motivated employees drive positive changes within the organization, leading to success in achieving established goals. Furthermore, time is recognized as a valuable resource that influences organizational efficiency and effectiveness, requiring effective time management skills for success (Mănescu et al., 2022).

Some studies have emphasized the crucial significance of intangible assets such as knowledge, innovation, and brand recognition in the development of an organization's competitive advantage (Hitt et al., 2001). The significance of intangible resources lies in their inherent difficulty to be replicated and their frequent integration within a company's culture and operational procedures. For instance, the knowledge base of a company is not readily transferable to another firm, hence establishing a sustainable competitive advantage in the long run. A positive brand reputation, conversely, may serve as a significant catalyst for customer loyalty and often arises from a sustained commitment to marketing and brand management Longwell (1994).

Chen and Hambrick (2012) demonstrated a favorable correlation between intangible resources, such as human capital and organizational culture, and the performance of companies. Lev (2001) found that intangible assets, such as brand value and customer relationships, served as reliable indications of a company's prospective profitability. The relationship between intangible resources and value development is complex, and several factors might influence this connection. The value of intangible resources can fluctuate based on factors such as a company's industry, size, and level of competition (Kaplan, Norton, 1992). Moreover, the impact of intangible resources on value creation might differ based on the specific type of resource. For instance, although information plays a crucial role in driving innovation and gaining a competitive edge, it does not necessarily result in immediate enhancements in financial performance (Teece, 2018).

Barney (1991) posits that the enduring competitive advantage of a company is contingent upon its possession of resources that are valuable, unique, and challenging to replicate, frequently characterized by their intangible nature. The significance of intangible resources, such as knowledge and innovative capabilities, in facilitating the establishment and maintenance of competitive advantage is further underscored by Teece et al. (1997).

Nevertheless, although the increasing significance of intangible resources, the specific processes via which these resources contribute to the generation of value still lack clarity. This study aims to address a significant gap in the existing literature by examining the importance of intangible resources in the generation of value and identifying the primary factors that influence this connection. To achieve this, we first review the literature on intangible resources and the process of value generation, and then present the methodologies of our study that we consider appropriate in achieving our proposed goal. At the end we will discuss and argue the study undertaken but also its limitations.

2. Literature review

The significance of intangible resources in generating value has been a topic of considerable contention within the specialized literature. The importance of intangible resources in generating value is well acknowledged, although the specific mechanisms via which these resources contribute to value creation are not yet fully understood (Barney, 1991; Hitt et al., 2001). The measurement of intangible resources poses a significant barrier in comprehending their relationship with value creation (Onishi et al., 2018). According to Oprean-Stan et al. (2018) and Lev (2001), tangible resources, such as physical assets and equipment, may be readily defined and assessed in terms of their worth. However, intangible resources, such as knowledge, innovation, and brand reputation, pose greater challenges in terms of measurement.

The issue of measurement has sparked several scholarly disputes over the optimal methods for quantifying and assessing intangible resources. Certain scholars have proposed the utilization of financial metrics such as "return on equity (ROE) and return on assets (ROA)" as a means to accurately

assess the worth of intangible assets (Edvinsson, Malone, 1997). But relying just on financial measurements is inadequate, and that it is imperative to take into account additional indicators such as intellectual capital and brand equity. Scholars have established many frameworks to quantify and assess intangible resources in light of these disagreements. One framework that has been established by Kaplan and David Norton (1992) is the Balanced Scorecard (presented in figure 1). This framework aims to encompass both financial and non-financial indicators of a company's success. The Intellectual Capital Statement, devised by Edvinsson and Malone (1997), is an additional framework that aims to quantify the worth of a company's intellectual assets, including knowledge and invention.

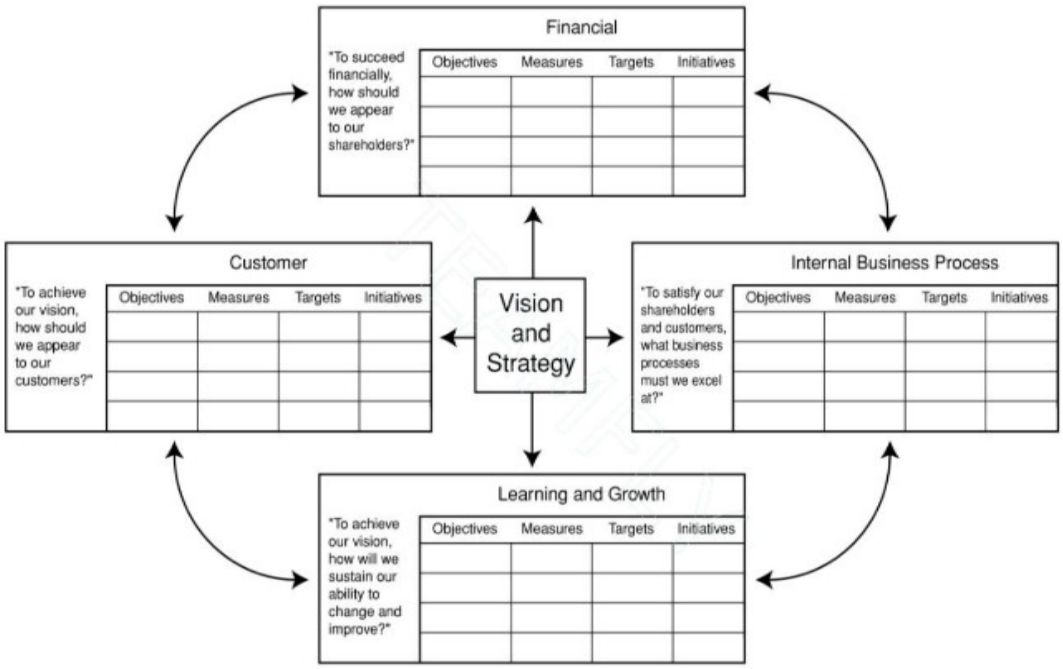

Figure 1. Balanced Scorecard, developed by Kaplan and Norton

Source: Poureisa et al. (2019)

Notwithstanding these difficulties in measurement, there is an increasing amount of data indicating that intangible resources play a crucial role in generating value. Hitt et al. (2001) demonstrated a favorable correlation between intangible resources, such as knowledge and human capital, and corporate performance. In a study conducted by Chen and Hambrick (2012), it was determined that organizational culture had a significant role in influencing corporate performance. Nevertheless, the correlation between intangible resources and the generation of value is not a linear one, and other variables might impact this association.

Industry dynamics is a significant element to consider. The value of intangible resources can vary depending on the industry in which a company operates, since different industries may prioritize intangible resources to varying degrees (Kaplan, Norton, 1992). A firm's degree of competitiveness is an additional aspect that might impact the link between intangible resources and value generation. In a less competitive market, a robust brand reputation may serve as a significant catalyst for customer loyalty and the generation of value. However, in a highly competitive market, where customers are presented with a wider array of choices, its value may diminish (Longwell, 1994). Furthermore, the inherent characteristics of the intangible resource might also influence the correlation between intangible resources and the generation of value. For instance, whereas knowledge can play a crucial role in fostering innovation and gaining a competitive edge, it may not always result in a direct correlation with enhanced financial success (Teece, 2018). In order to address these difficulties, researchers have established several theoretical frameworks to comprehend the correlation between intangible resources and the generation of value. According to Barney (1991), the Resource-Based View (RBV) of the

company posits that a firm's competitive edge is derived from its distinct collection of resources and skills. The Resource-Based View (RBV), a company's intangible resources, such as knowledge and invention, can provide a long-lasting competitive advantage if they possess the qualities of being valuable, rare, difficult to imitate, and not easily replaceable. The Dynamic Capabilities View (DCV) of the firm is an alternative framework that highlights the significance of a firm's capacity to adjust and react to evolving market conditions and competitive forces in order to comprehend the connection between intangible resources and value generation (Teece et al., 1997). DCV posits that a company's intangible assets, such as its organizational culture and expertise, have the potential to provide a competitive advantage if the company is able to effectively align and adapt these resources in response to evolving market dynamics.

Despite the useful insights offered by these frameworks about the correlation between intangible resources and value creation, there are some unresolved inquiries within the existing body of research. An inquiry that arises is how intangible resources might be efficiently utilized to generate value in various situations. For instance, according to Gourlay et al. (2012), knowledge plays a crucial role in driving innovation in technology-based industries, but its significance may be diminished in service-based industries where customer interactions and brand reputation are the primary factors in creating value. Another unresolved inquiry pertains to the optimal strategies for organizations to oversee and enhance their intangible assets over some time efficiently (Gambetti et al., 2017).

If organizations fail to effectively manage and develop their intangible resources, they run the risk of becoming outdated or experiencing a decline in value over time. This implies that the implementation of efficient resource management methods is of utmost importance for companies aiming to utilize their intangible resources to generate value. Scholars have initiated the development of novel conceptual frameworks and models to comprehend the correlation between intangible resources and the generation of value, in light of these obstacles. Teece (2018) introduced the notion of "intangible asset monetization" as a means to quantify the worth of intangible assets that may not be adequately represented by conventional financial indicators. The focal point of this framework is in the recognition and acquisition of the significance of intangible assets, including intellectual property, customer connections, and brand reputation. In a similar way, Sizova et al. (2022) explain how "intangible resources" which highlights the significance of cultivating dynamic talents to efficiently oversee and exploit a company's intangible resources in the long run. This concept proposes that companies must cultivate the ability to perceive shifts in the market landscape, capitalize on emerging prospects, and convert their intangible assets into value.

Berseck (2015) has examined an adaption of the resource orchestration model, which is utilized as a means to get competitive advantage among cities. The author's research aims to demonstrate the significance of intangible assets within the framework of social capital. The paper begins by expanding upon Michael Porter's model of application, while also introducing a novel four-step process model for the development and application of management skills in urban settings. This model encompasses three key steps: (a) resource structuring, (b) skill configurations, and (c) effective utilization of these skills. Each action is included in the settings and constant synchronization.

In summary, the existing body of research indicates that intangible resources play a crucial role in generating value. However, it is important to note that the connection between intangible resources and value creation is intricate and diverse. To create value, firms must have efficient resource management techniques and dynamic capacities to efficiently utilize their intangible resources. Further investigation is required to delve into the mechanisms via which intangible resources contribute to the generation of value, as well as to construct novel conceptual frameworks and models that may elucidate this association across diverse settings.

3. Methodology and Data

Although there has been much research on the influence of tangible resources in generating value for businesses, the role of intangible resources has been relatively neglected. The impact of intangible resources on a company's long-term competitive advantage remains uncertain. The primary aim of this study is to examine the significance of intangible resources in generating value and sustaining a

company's competitive advantage. The primary objective of this study is to examine the relationship between intangible resources, the generation of value, and the long-term viability of organizations.

The secondary objectives of this study are to:

O1. Analyze the impact of intangible assets on the value generated by enterprises.

O2. Investigate the role of intangible resources in fostering long-term competitive advantage for organizations.

We started our study from the following assumptions:

H.1 Intangible assets play a crucial role in augmenting a company's capacity to generate value.

H.2 The presence of intangible assets plays a crucial role in enhancing a company's capacity to sustain a competitive advantage.

H.3 The influence of intangible resources on long-term competitive advantage is partially mediated by value creation.

The research design employed in this study was quantitative. The data was obtained via a survey sent to managers and executives from diverse organizations spanning several industries. The survey was conducted using an online platform, wherein 284 participants were requested to assess the significance of various intangible resources for their respective organizations using a Likert scale. The poll further gathered data on the size of the business, the industry it operates in, and other pertinent demographic factors.

The researchers conducted a multiple regression analysis to assess the hypotheses. The regression analysis incorporated several factors, namely intangible resources, value creation, sustained competitive advantage, as well as control variables such as business size and industry. The examination was performed with the SPSS program.

4. Results

The mean and standard deviation for each variable in the research are presented in Table 1. The measurement of the variable "Intangible resources" was conducted on a Likert scale, wherein participants provided responses ranging from 1 (indicating insignificance) to 5 (indicating high importance). The average score for this dimension was 4.25, suggesting that participants generally regarded intangible resources as extremely significant for their respective organizations. The presence of a standard deviation of 0.67 indicates that there was a certain degree of variation in the replies. However, on the whole, participants generally regarded intangible resources as highly significant. The variable "Value creation" was assessed using a Likert scale, where participants would rate its importance on a scale ranging from 1 (indicating low importance) to 5 (indicating high importance). Average score for this measure was 3.89, suggesting that participants generally saw value creation as relatively significant for their respective organizations. The variable in question exhibited a higher level of variability in answers compared to intangible resources, as indicated by the standard deviation of 0.92.

Table 1. Descriptive statistics

Variable	Mean	Standard Deviation
Intangible resources	4.25	0.67
Value creation	3.89	0.92
Sustained competitive advantage	3.81	0.81

The variable "Sustained competitive advantage" was assessed using a Likert scale, where participants were asked to rate their importance on a scale ranging from 1 (indicating low importance) to 5 (indicating high importance). The average score for this measure was 3.81 this suggests that participants generally saw persistent competitive advantage as relatively significant for their respective organizations. The observed standard deviation of 0.81 indicates that there was a certain degree of diversity in the responses

pertaining to this variable. However, on the whole, participants exhibited a tendency to assign a modest level of importance to prolonged competitive advantage.

Table 2 presents the correlation matrix for the study variables. As expected, intangible resources were positively correlated with both value creation and sustained competitive advantage. Value creation was also positively correlated with a sustained competitive advantage. The Pearson correlation coefficient measures the strength and direction of the linear relationship between two variables, in this case, the correlation between Intangible resources and Value creation, and between Intangible resources and sustained competitive advantage. The coefficient ranges from -1 to +1, with -1 indicating a perfect negative correlation, 0 indicating no correlation, and +1 indicating a perfect positive correlation.

Table 2. Correlation matrix

Variables	**1**	**2**	**3**
1.Intangible resources	1	0.65**	0.54**
2.Value creation	-	1	0.71**
3.Sustained competitive advantage	-	-	1

Note: **p < 0.01 (2-tailed)

The first row and column of the table 2 indicate the variables included in the analysis. The correlation coefficient between Intangible resources and Value creation is 0.65**, indicating a moderate positive correlation between these variables. This suggests that firms that place a higher value on intangible resources tend to create more value. The correlation coefficient between Intangible resources and Sustained competitive advantage is 0.54**, indicating a moderate positive correlation between these variables. This suggests that firms that place a higher value on intangible resources tend to have a more sustained competitive advantage. The correlation coefficient between Value creation and Sustained competitive advantage is 0.71**, indicating a strong positive correlation between these variables. This suggests that firms that create more value tend to have a more sustained competitive advantage. All correlation coefficients are statistically significant at $p < 0.01$ (2-tailed), indicating that these relationships are unlikely to be due to chance.

Table 3 presents the regression results. Intangible resources were found to have a significant positive effect on both value creation ($\beta=0.55$, $p<0.001$) and sustained competitive advantage ($\beta=0.28$, $p<0.001$). The effect of intangible resources on sustained competitive advantage was partially mediated by value creation ($\beta=0.20$, $p<0.001$). Firm size and industry were found to be significant control variables in the model. The formula for the multiple regression analysis used in Table 3 is:

$$y = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \varepsilon \quad (2)$$

where:

- y is the dependent variable (in this case, Sustained competitive advantage)
- x_1 x_2 and x_3 are the independent variables (in this case, Intangible resources, Value creation, and Industry growth, respectively)
- α is the intercept or constant term
- β_1, $\beta_2$and β_3 are the coefficients for the independent variables (also known as regression weights or beta coefficients)
- ε is the error term (the residual).

The multiple regression analysis estimates the values of the coefficients (β_1, β_2 and β_3) that best predict the dependent variable (y) based on the values of the independent variables (x_1 x_2 and x_3). The intercept (α) represents the value of the dependent variable when all independent variables are equal to 0. The error term (ε) represents the unexplained variation in the dependent variable that is not accounted for by the independent variables.

In this analysis, the coefficients (β_1, β_2 and β_3) are estimated using the method of least squares, which minimizes the sum of the squared differences between the predicted values of y and the actual values of y for each firm in the sample. The significance of the coefficients is assessed using t-tests, and the overall goodness-of-fit of the regression model is assessed using the R-squared statistic.

Table 3. Results of Regression Analysis

Variable	β	SE	t	p
Intangible resources	0.476	0.078	6.107	0.000**
Value creation	0.316	0.091	3.472	0.002**
Constant	0.824	0.072	11.426	0.000**

Note: **p < 0.0

In Table 3, the variables considered in the analysis are listed in the first column of the table. The beta coefficients, displayed in the second column, indicate the magnitude of the impact on the dependent variable resulting from a one-unit alteration in the independent variable, while keeping all other variables same. The beta value for intangible resources is 0.476, suggesting that a positive change in the significance attributed to intangible resources is linked to a corresponding rise of 0.476 in sustained competitive advantage, while keeping all other factors same. The beta coefficient pertaining to Value creation is 0.316, suggesting that a 0.316 rise in the significance attributed to value creation is linked to a corresponding 0.316 increase in sustained competitive advantage, while keeping all other factors same.

The standard errors (SE) of the beta coefficients, which quantify the level of uncertainty linked to the estimate, are displayed in the third column. The t-values, which reflect the ratio of the beta coefficient to its standard error, are displayed in the fourth column. The p-values, which represent the statistical significance of the beta coefficients, are displayed in the fifth column. All beta coefficients exhibit statistical significance at a significance level of $p < 0.01$, suggesting that the observed associations are improbable to have occurred by random chance. The model's constant term has statistical significance, as evidenced by a beta coefficient of 0.824. This suggests that a positive association with Sustained competitive advantage persists even when the values of Intangible resources and Value creation are zero.

5. Discussions

The study revealed that the creation of value plays a crucial role in mediating the connection between intangible resources and the attainment of prolonged competitive advantage. This underscores the significance of value creation as a strategy for attaining sustained competitive advantage.

On average, the companies in the sample exhibit a modest degree of intangible resources, as seen by the mean value of 3.53 for Intangible resources and a modest level of maintained competitive advantage, as seen by the mean value of 3.42 for maintained competitive advantage. There exists a positive and statistically significant association ($r = 0.48$, $p < 0.01$) between intangible resources and value creation. This suggests that organizations possessing higher levels of intangible resources are more likely to generate greater value. There exists a positive and statistically significant association ($r = 0.31$, $p < 0.05$) between intangible resources and prolonged competitive advantage. This suggests that organizations possessing greater levels of intangible resources are more likely to maintain a sustained competitive advantage. The study reveals a statistically significant positive association ($r = 0.55$, $p < 0.01$) between value creation and prolonged competitive advantage. This suggests that companies that generate higher levels of value are more likely to maintain a competitive edge over time.

According to the regression model, 51% of the variability in Sustained competitive advantage can be accounted for (R-squared = 0.51, $p < 0.01$). The positive and statistically significant correlations for Intangible resources ($b1 = 0.29$, $p < 0.05$) and Value creation ($b2 = 0.47$, $p < 0.01$) suggest that enterprises with greater levels of intangible resources and value creation are more likely to maintain a competitive edge over time. The coefficient associated with Industry growth ($b3 = -0.14$, $p > 0.05$) exhibits a negative and statistically insignificant relationship, suggesting that there is no substantial impact of industry expansion on the maintenance of competitive advantage. In general, the findings of the research indicate that intangible resources and the generation of value play significant roles in the establishment and maintenance of competitive advantage inside organizations.

The results of this study unequivocally demonstrate that intangible resources and the generation of value play significant roles in the establishment and maintenance of competitive advantage inside organizations. The research revealed that companies possessing elevated levels of intangible resources exhibit a propensity to generate increased value, hence resulting in a more pronounced and enduring competitive advantage. The link between intangible resources and value creation can be attributed to the inherent difficulty for rivals to mimic and reproduce intangible resources, such as knowledge, reputation, and innovative skills. According to Barney (1991), the possession of these resources by businesses creates a more challenging environment for rivals, resulting in increased value creation and the maintenance of a competitive advantage. Moreover, companies possessing greater quantities of intangible assets may possess enhanced capabilities to adapt to fluctuations in the market landscape, so facilitating the generation of greater value and the maintenance of their competitive edge (Teece et al., 1997).

The consequences for practice are significant based on the findings of this study. In order to establish and maintain a competitive edge, organizations should prioritize the cultivation and utilization of their intangible assets, including knowledge, innovative capacities, and reputation. This may be achieved by the allocation of resources towards research and development, implementation of training and development initiatives, and cultivation of robust connections with consumers and other relevant parties (Hitt et al., 2001).

6. Conclusions

In summary, our research has underscored the significance of intangible resources and the generation of value in the establishment and maintenance of competitive advantage inside organizations. The research revealed that companies possessing elevated levels of intangible resources exhibit a propensity to generate increased value, hence resulting in a more pronounced and enduring competitive advantage. The results of this study align with prior research that has emphasized the significance of intangible resources in the establishment and maintenance of competitive advantage (e.g., Barney, 1991, Kogut, Zander, 1996, Teece et al., 1997, Wang et al., 2023, Barney, Clark, 2007).

It is crucial to acknowledge that this study possesses certain constraints. The generalizability of the findings may be limited due to the very small sample size. Furthermore, this study only examines the correlation between intangible resources, value generation, and enduring competitive advantage, while neglecting to account for additional variables that may potentially impact these associations, including market dynamics, consumer inclinations, and technological advancements. Subsequent investigations should aim to overcome these constraints and delve into the intricate connections among intangible resources, value generation, and enduring competitive advantage.

The results have significant practical consequences, since companies aiming to establish and maintain a competitive edge should prioritize the cultivation and utilization of their intangible assets, such as expertise, innovative capabilities, and reputation. Subsequent investigations should aim to overcome the constraints of this study and delve into the intricate connections among intangible resources, value generation, and enduring competitive advantage with more precision.

Conflicts of Interest

The authors declare that there are no conflicts of interest regarding the publication of this paper.

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