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The Entrepreneurial Leadership, Innovative Behaviour, and Competitive Advantage Relationship in Manufacturing Companies: A Key to Manufactural Development and Sustainable Business

Kansu Ercantan *, Şerife Z. Eyupoglu and Özlem Ercantan

Business Administration Department, Faculty of Economics and Administrative Sciences, Near East University, Nicosia 99010, Cyprus; serife.eyupoglu@neu.edu.tr (Ş.Z.E.); ozlem.ercantan@neu.edu.tr (Ö.E.)
* Correspondence: 20195315@std.neu.edu.tr

Abstract: The ability of management to influence employee attitudes and behaviours towards organizational goals is pivotal for an organization's competitiveness, development, and survival. The study's objective was to investigate the link between entrepreneurial leadership, competitive advantage, and manufacturing development, mediated by employees' innovative behaviour, via the lens of resource-based view theory. Convenience sampling was used to collect quantitative data from the 378 manufacturing sector employees through the use of a cross-sectional design. There is a lack of research on the underlying mechanisms by which leaders influence organizational processes, such as innovation stimulation. This study explores the psychological mechanisms influencing entrepreneurial leadership and employee innovative behaviour, revealing that entrepreneurial leadership reduces work uncertainty, encourages innovation, and significantly impacts a firm's competitive advantage in the market. The findings of the study revealed that entrepreneurial leadership fosters an encouraging and supportive environment in the workplace, which in turn leads to a sustainable competitive advantage. Additionally, the findings showed that innovative behaviour significantly mediates the relationship between entrepreneurial leadership and competitive advantage. By expanding the applicability of resource-based view theory, the results of this research also contribute to the comprehension of the interplay between innovative attitudes, manufactural development, competitive advantage, and leadership, specifically in the context of manufacturing sector organizations.

Keywords: entrepreneurial leadership; innovative behaviour; sustainable competitive advantage; manufactural development; sustainable business

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1. Introduction

The global landscape is undergoing rapid transformations in various domains such as products, technology, and economies, with a growing focus on entrepreneurship as a catalyst for growth in economies [1]. Entrepreneurial leadership (EL) is considered indispensable for firms to prosper and foster innovation [2]. This approach integrates entrepreneurial aptitude with leadership attributes and is essential for promoting innovation, regardless of a company's size or framework [3]. Although entrepreneurial leadership is acknowledged for its performance in complex environments, there is a scarcity of research on its influence and effectiveness [4]. It has arisen as a response to the challenges that are posed by the corporate environment of the 21st century [5]. According to Boyles, J. L. (2016), the corporate world is full of unexpected challenges and innovation can help businesses to maintain a competitive advantage while also increasing the profitability of the business. Innovation allows for greater flexibility and promotes growth, and in this sense, stagnation can be devastating for a business. Innovation is critical to surviving in today's intensely competitive climate and attaining organizational and economic progress,

and it sets firms apart from their competitors. In most businesses, multiple competitors provide similar goods and services, so innovation can help to differentiate a company from the competition [6].

Simultaneously, sustainability has become increasingly important in evaluating corporate performance benchmarks, emphasizing the need to adopt innovative solutions to guarantee long-term viability and environmental welfare [7,8]. However, research frequently emphasizes external factors and overlooks the specific internal processes that contribute to innovative behaviour (IB) within businesses [9,10]. The leadership behaviours of entrepreneurs have a significant effect on creating an environment that promotes innovative behaviour among employees in small enterprises [11]. According to Omri [12], managers who encourage innovative work behaviours significantly improve firm performance. Companies with a competitive advantage (CA) create value by reducing expenses, identifying opportunities, and overcoming obstacles. Entrepreneurial leadership is related to competitive advantage as it encourages innovation, which has a significant impact on a firm's market position and performance [13].

However, there is a lack of research on the underlying mechanisms by which leaders influence organizational processes, such as innovation stimulation [14]. This study aims to uncover the psychological mechanisms underlying the relationship between entrepreneurial leadership and employees' innovative behaviour, proposing that entrepreneurial leadership reduces work uncertainty, leading to more proactive work behaviour among employees [15]. An accomplished entrepreneurial leader possesses the ability to furnish crucial information and resources that foster employee confidence, thereby facilitating the establishment of sustainable enterprises [16–18]. Additionally, a growing body of research has identified entrepreneurial leadership as the leadership behaviour that significantly encourages innovation in extremely difficult and competitive environments [19,20]. Superior performance results from the ability of entrepreneurial leaders to identify and seize business opportunities, encourage the innovation capacity of new ventures, and nurture the creativity of their followers. The correlation between effective leadership and sustained competitive advantage, productivity, and innovation is obvious [21]. This study addresses the above-mentioned gap by examining the proposed mediation model by drawing on the resource-based view (RBV), which emphasizes the efficient utilization of unique resources and capabilities for competitive advantage [22], as entrepreneurial leadership and innovative behaviour are sources of competitive advantage. Leaders in the manufacturing sector are also looking for entrepreneurs [23] who can manage the integration of innovative ideas into a complicated manufacturing system. The comprehensive digitalization of the manufacturing process in Industry 4.0 necessitates a shorter timeframe for manufactural development and innovation [24]. Manufacturing companies face fierce global competition in new products; production technologies, new materials; and legislative, organizational, or business model developments, and usually use innovation only to cope with the competition or to gain a competitive advantage through increased productivity and other manufacturing-relevant figures, such as flexibility or agility [25]. For many manufacturing companies, having strong innovative capacity is a critical component of manufactural development and competitive advantage [25].

Considering the capabilities of entrepreneurial leaders, including analytical thinking, responsibility, emotional intelligence, and accountability, alongside the four well-known RBV individual characteristics (valuable, rareness, imperfect imitability, and substitutability), which are among the intangible resources that assist firms in attaining a competitive advantage, sustainability, and maximization, illustrates the relationship between RBV and entrepreneurial leadership [5,26]. This research presents a critical contribution to knowledge for researchers and academicians, and additionally, managers and business owners in the manufacturing sector can use this study's findings and concentrate on entrepreneurial leadership and innovative behaviour to achieve a competitive advantage. Therefore, the purpose of the current research is to construct a conceptual model that clarifies how entrepreneurial leadership can cultivate competitive advantage for firms in the manufacturing

sector and to investigate the mediating role of innovative employee behaviour in this relationship using a sample of 378 full-time employees from North Cyprus. By conducting an in-depth examination of the mediating mechanism of innovative employee behaviour and providing empirical evidence regarding the significance of entrepreneurial leadership in fostering competitive advantage, this research contributes significantly to the literature on innovation and leadership and fills several gaps in the current body of knowledge. Incorporating RBV theory also contributes to a more complete and nuanced understanding of this relationship.

Local governments may find this research beneficial when developing policies for regional economic development that will reinforce the manufacturing industry by encouraging innovation and creating sustainable businesses. In conclusion, the introduction part provides an overview of the study, points out areas of current research that require attention, argues for the necessity of the study, and highlights the study's contribution.

2. Literature Review and Hypothesis

2.1. Entrepreneurial Leadership and Competitive Advantage

Entrepreneurship involves individuals, teams, and organizations seeking new economic opportunities. As entrepreneurs explore new opportunities, leaders must respond to challenges and innovations to secure their firms' success. Fernald et al. [27] emphasized that enterprises can enhance their competitiveness by embracing entrepreneurial leadership in dynamic environments. New approaches to developing the necessary skills are needed in a business environment that is changing quickly so that managers can react quickly to ongoing changes. Interestingly, the need for entrepreneurial leadership is growing every day in order to promptly adjust to continuous changes in a global economy. It should be noted in this context that entrepreneurial leadership is a blend of various personality traits rather than a single attribute. Imagination, foresight, strategic thinking, and collaboration are a few of the personality attributes exhibited by entrepreneurial leaders [28].

Van Zyl and Mathur-Helm [29] found a positive association between entrepreneurial leadership, innovation, and business performance. Entrepreneurial leadership has been defined in various ways, including as a leadership style that fosters visionary scenarios and mobilizes participants for strategic value creation [30]. It serves as a framework for examining leadership's role in entrepreneurial contexts [31–34]. Entrepreneurship is widely acknowledged as a driver of economic development and entrepreneurship research, as highlighted by Carlsson et al. [35], and consistently addresses key themes of opportunity recognition, innovation, and risk-taking. These attributes align with classical notions of entrepreneurs as risk-takers, creators, and economic equilibrium arbiters, inherently making them leaders. Leadership and entrepreneurship are developing as major research areas [36,37]. Leaders are integrated into entrepreneurship's application via entrepreneurial leadership, as shown by Gupta et al. [30] and Kuratko [1], and a recent study [38]. The growing body of literature on EL from both empirical and conceptual standpoints notwithstanding [34], there is limited consensus on the definition and attributes of entrepreneurial leadership. According to the study of Harrison C. et al. [34], the result is a diverse literature base with a distinct research gap in the knowledge and understanding about entrepreneurial leadership, both conceptually and empirically. Entrepreneurship is often cited as a major engine of economic growth [39]. Vecchio [40] defined entrepreneurial leadership as a style of leadership confined to entrepreneurial ventures. Entrepreneurial leadership addresses followers' demands to improve performance, but its success depends on an organization's adaptability to new opportunities [41]. Envisioning future success, a forward-thinking mindset, identifying opportunities, encouraging innovative actions, effective problem-solving, and an innovation-promoting organisational culture are required. Gupta, MacMillan, and Surie [30] describe entrepreneurial leadership conceptually as consisting of three dimensions. First, innovation fosters team creativity and novel product and service creation. The second dimension, proactiveness, engages people in continual competition with other organizations. Thirdly, risk-taking involves facing uncertainty and taking

responsibility. It seems that entrepreneurial leadership has a relationship to firm growth, as it creates a competitive advantage and ensures sustainability [42]. However, the study of the relationship between entrepreneurial leadership and business model is still limited; thus, an investigation on this relationship needs to be conducted. According to Palalic [42], entrepreneurial leadership helps firms develop and survive. Therefore, entrepreneurial leaders align their teams to proactively seek opportunities, take measured risks, and build a culture of creativity and change to drive innovation and competitiveness. Companies seeking long-term success in flexible business contexts need these entrepreneurial leadership-based traits. Entrepreneurs and leaders in established companies have been extensively studied [43]. Leitch and Volery [5] examined entrepreneurs' unique traits and personalities. Entrepreneurial leaders' ability to guide innovation and discover opportunities has been highlighted in previous studies [44,45]. Gupta et al. [30]'s entrepreneurial leadership framework tackles entrepreneurial leaders' psychological and functional challenges. It stresses personal competencies in visualizing a successful future, building an innovative workplace culture, and spotting opportunities. These competencies motivate team members to engage in innovative and entrepreneurial endeavours. This research emphasizes the importance of entrepreneurial leadership in supporting entrepreneurial behaviour inside an organization, emphasizing the role of entrepreneurial leaders in establishing culture and motivating people to pursue innovative and entrepreneurial opportunities. Renko et al. [3] found that entrepreneurial leaders influence employees' creativity and opportunity identification, underlining the need for more research to fully understand its impact on organizational outcomes. Porter [46] characterized competitive advantage as essential to business success. It means that a business can outperform its competitors by reducing costs, seizing market opportunities, and limiting hazards to improve entrepreneurial outcomes [47]. In dynamic environments with significant uncertainty about future competition and market conditions, businesses must be flexible and rooted in prior experiences to develop a competitive advantage [48]. Leaders help employees to achieve a firm's strategic goals, including utilizing competitive advantage.

Entrepreneurial leadership, particularly within top management teams (TMTs), is widely recognized in the literature as a critical driver of a company's global competitiveness [49–52]. Proponents of TMTs argue that personnel should be able to leverage potential competitive advantage to achieve a company's strategic goals [49,50]. The RBV emphasizes that many companies have consistently harnessed their resources and capabilities to establish and maintain competitive advantage [53]. Globalized organizations face intense competition. Building strong competitive advantage through active human resource management is crucial. Organizational effectiveness and fair treatment of human capital drive competitive advantage, as highlighted by Pfeffer, J., et al. [54]. To outperform rivals, organizations must differentiate their performance and strategy, enhancing their resources, a top priority per Khawaja et al. [55]. Entrepreneurial leaders, with their entrepreneurial qualities and strategic perspectives, play a vital role in shaping effective strategies in today's global economy. Their initiatives can enhance an organization's competitive advantage by identifying and capitalizing on entrepreneurial opportunities that foster innovation and competitiveness. The RBV stresses the need of human and social capital for competitive advantage sustainability [56–58].

According to Khawaja et al. [55], organizations need to differentiate their performance and strategy from other organizations, and by improving the resources, organization can gain competitive advantage. Every organization is striving hard to achieve competitive advantage over others. The competitive advantages of businesses also require superior-quality resources, such as the creative leadership role. This leadership is often identified with entrepreneurial leadership [59]. When a leader who engages in proactive entrepreneurial behaviour by optimizing risk, innovating to take advantage of opportunities, taking personal responsibility, and managing changes in the environment certainly have an impact on competitive advantage for businesses. Prior literature implies a link between entrepreneurial leadership and competitive advantage, but more research is needed to validate it. In highly

competitive and frequently changing situations, an entrepreneurial mindset that identifies and evaluates opportunities is crucial to businesses' competitive advantage [60]. A recent study showed that an entrepreneurial attitude helps organizations to develop competitive advantage-generating strategies [61,62]. Entrepreneurs might see uncertainties as opportunities, which can lead to a competitive advantage for enterprises [62]. Based on this concept, our hypothesis is as follows:

H1. *Entrepreneurial leadership has a significantly positive influence on competitive advantage.*

2.2. Entrepreneurial Leadership and Innovative Behaviour

Entrepreneurial leaders significantly influence organizational innovation in multiple ways. They are instrumental in fostering an entrepreneurial culture within the company, facilitating innovative problem-solving, and enhancing overall company performance [43,63]. Creative thinking is a fundamental characteristic of successful entrepreneurs [1,32,64], and leaders leverage entrepreneurial leadership qualities, such as innovativeness, proactivity, and risk-taking, to improve the effectiveness of their task performance [32,63]. Entrepreneurs employ a method that involves assessing their employees' potential and capabilities to create an environment that enhances individual self-efficacy, encourages the generation of new ideas, and motivates employees to act on those ideas [43]. Entrepreneurial leaders play a crucial role in nurturing a supportive workplace environment where innovation is recognized as a collective responsibility [63]. They also establish the necessary structures and mechanisms to facilitate the organization's ongoing innovation process [5]. Entrepreneurial leadership entails autonomous motivation by providing autonomy and inculcating a supportive climate that leads to employees' innovative behaviour. The encouragement of innovative behaviour by entrepreneurial leadership develops the propensity to explore and utilize higher performance [65,66]. Based on this concept, our hypothesis is as follows:

H1a: *Entrepreneurial Leadership has a significantly positive effect on employee innovative behaviour.*

2.3. Innovative Behaviour and Competitive Advantage

Innovation is widely acknowledged as a vital factor in enabling firms to generate value and maintain a competitive advantage in the intricate and swiftly evolving business environment of today [67] According to Xu, A.; Qiu, K.; Jin, C.; Cheng, C.; and Zhu, Y. [68], innovation is commonly recognized as a crucial component of modern economic growth that fosters sustainable development. It not only introduces new, intangible assets into organizations, but also optimizes existing resources, enhances operational efficiency, and adds value [69]. Companies with a high degree of innovativeness are associated with increased productivity [70]. Consequently, they are better positioned to meet customer demands, drive innovation, and achieve higher levels of performance and profitability [67]. In the context of contemporary business organizations, the significance of innovation for achieving operational excellence is well-established and widely studied [71,72] To stay competitive, businesses are expediting their innovation processes, as supported by research conducted by Alsaadi, Abuelhassan, et al. [69]; Hossain, Khalifa, and Abu Horaira [73]; and Sudigdo and Khalifa [74]. These studies demonstrate that prioritizing innovation velocity can lead to increased market share and competitiveness across various industries. To achieve a competitive advantage, companies can strategically segment markets based on service quality and operational efficiency, which is achieved through the development, production, and sale of new products. The proprietary knowledge embedded in these innovations is often inaccessible to competitors, making this approach effective [70,71,75–77]. Rapid innovation, as seen in the velocity of introducing new goods, facilitates agile adaptation to changing conditions, reducing time and costs and ultimately enhancing overall organizational performance [78].

Furthermore, the quality of innovation plays a pivotal role in determining a corporation's success. When a company adopts a wide range of innovative goods, methods, or practices across various organizational activities, it signifies a high degree of innovation. The development of synergies across these diverse operational sectors should be conducted ethically, fostering the generation of novel ideas and enhancing competitiveness. Organizations benefit from an increased flow of ideas, and implementing more creative research and development (R&D) practices can enhance firm performance [71]. Although there has been significant discussion about the relationship between creativity and company success, there is a limited body of research specifically examining the impact of human intellectual capital on operational performance within firms. Based on this concept, our hypothesis is as follows:

H1b: *Innovative behaviour has a significantly positive effect on competitive advantage.*

2.4. Mediation Effect of Innovative Employee Behaviour

Individuals with specific knowledge and abilities who actively promote innovation and explore new opportunities can be classified as entrepreneurial leaders [44]. A study by Huang, Ding, et al. [79] explored the impact of entrepreneurial leadership on organizational creativity. Gupta et al. [30] developed a framework for entrepreneurial leadership considering the personal and functional challenges faced by these leaders. It suggests that the personal capabilities of entrepreneurial leaders enable them to create unique and innovative visions for their organization. Functional competencies empower them to influence and motivate team members, encouraging innovative approaches [80]. These leaders guide their teams in generating novel ideas while boosting their confidence and commitment to implementing these innovations. Innovation encompasses a broader scope than creativity, covering not only the generation of novel ideas, but also their effective application. Innovative behaviour involves the actions taken by individuals to initiate or introduce innovative ideas, processes, products, or beneficial methods within their roles, teams, or organizations. Innovative behaviour includes identifying favourable opportunities, generating original methods to leverage them, and building coalitions to effectively promote and implement innovations. This multi-dimensional approach helps in evaluating the presence and impact of innovative behaviour in a workplace setting, contributing to performance improvement.

Entrepreneurial leaders foster innovative thinking within organizations by fostering a vision [63], promoting a positive attitude, and motivating employees to generate ideas and explore alternative problem-solving strategies [81]. They create a culture that encourages engagement in addressing innovative challenges, fostering an environment for innovation [63]. Entrepreneurial leaders are characterized by higher self-confidence, a greater willingness to take risks, and a propensity for experimentation [82]. They stimulate team innovation by modelling innovation and creating a creative workplace [83]. Empirical studies consistently demonstrate a strong link between entrepreneurial leadership and innovation. Utoyo et al. [84] found that strong entrepreneurial qualities can inspire positive emotions like courage and enthusiasm among followers, leading to the generation of innovative solutions in the workplace and influencing the relationship between entrepreneurial leadership and innovation performance.

Malibari et al. [85]'s study revealed a significant correlation between entrepreneurial leadership and employee innovative behaviour, influenced by an innovation-friendly atmosphere and employee intellectual agility. Further research is needed to understand the underlying mechanisms influencing entrepreneurial leadership and employee innovative behaviour. Entrepreneurial leadership is a strategic approach that coordinates and motivates operational systems and personnel within organizations to achieve fundamental principles like risk-taking, capitalizing on opportunities, fostering innovation, establishing competitive advantages, and enhancing entrepreneurs' capabilities [30]. It intersects entrepreneurship and leadership [40,45], guiding employees to pursue visionary objec-

tives [86]. The values and perspectives of the leadership team significantly influence the organization's strategy and performance.

Empirical evidence from various studies, including Cogliser and Brigham [45], Vecchio [40], and Wales [87], highlights the importance of entrepreneurial leadership in achieving significant outcomes in entrepreneurial ventures. It is crucial to adapt leadership approaches to the evolving corporate landscape, as evidenced by numerous studies like those by Gupta et al. [30], Kuratko [1], and Surie and Ashley [64], which emphasize the strong association between entrepreneurial success and the leader's ability to motivate followers toward creative and innovative thinking and behaviour. Fostering an innovation-friendly atmosphere that inspires openness to new ideas and motivates employees to actively seek them has been supported by studies conducted by Li et al. [88] and Yu et al. [89], showing an increase in innovative behaviour as a result. There is a growing recognition that engaging employees in creative behaviour plays a critical role in cultivating a culture of continuous innovation, as reflected in recent research by Akbari et al. [90] and Bagheri et al. [91]. Recent research has primarily concentrated on transformational leadership [90,92], but there has been a surge in exploring alternative leadership styles like genuine, ethical, and entrepreneurial leadership [93–95]. These studies emphasize the importance of leaders supporting their subordinates in recognizing and capitalizing on entrepreneurial opportunities, which is crucial for achieving a competitive advantage and overall organizational success, especially in dynamic work environments. Our hypothesis is as follows:

H2: *Innovative behaviour significantly mediates the relationship between entrepreneurial leadership and competitive advantage.*

The conceptual framework for this study is presented in Figure 1.

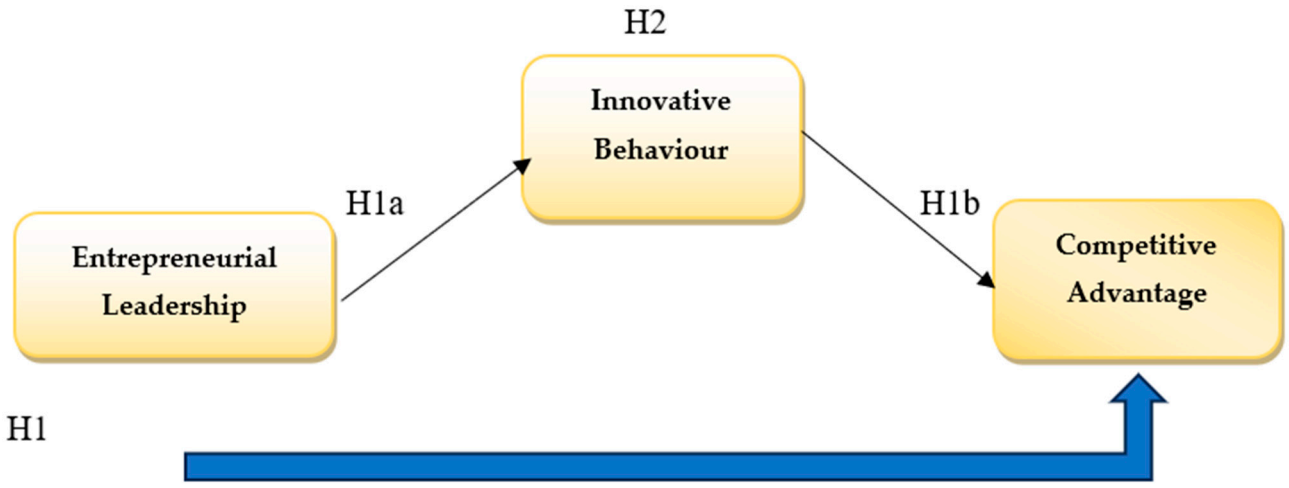

Figure 1. Research model.

3. Methodology

3.1. Research Population and Sample

A cross-sectional survey study was conducted using convenience sampling as the sample method. The data were gathered over the period spanning from May 2023 to July 2023. The population under consideration comprised 9965 employees working in enterprises in the manufacturing sector in North Cyprus. As the unit of analysis, 385 full-time employees out of 9965 employees were found to be suitable [96], ensuring a 95.0% accuracy/margin of error and a 95.0% confidence level. In total, 385 survey questionnaires with a hyperlink to access the electronic survey were sent to the employees employed on a full-time basis and working in the manufacturing sector. Convenience sampling was

used where participants were selected for inclusion in the sample because they were the easiest for the authors to access. The authors reached out to workers in the industry and kept reaching out to others recommended by the participants. Therefore, the number of potential participants increased after reaching out to every suggested person. The authors paid attention to reaching out to people working in different companies. On average, 2 to 3 participants maximum were included from each company. This helped to ensure that as many different companies as possible were included, and as a result, different leadership styles were investigated. After excluding incomplete replies, the final sample had 378 valid responses, resulting in a response rate of 98%.

3.2. Measures

The questionnaire consisted of four parts: demographic information, the entrepreneurial leadership scale, the innovative behaviour scale, and the competitive advantage scale.

3.2.1. Entrepreneurial Leadership

To measure entrepreneurial leadership, the entrepreneurial leadership scale was adopted from Renko, M.; El Tarabishy, A.; Carsrud, A.L.; and Brännback, M. [3], consisting of 8 questions on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). Entrepreneurial leadership was measured using eight items (Cronbach's $\alpha = 0.863$). A sample item for entrepreneurial leadership included the following: "Do you think your boss or manager often comes up with radical improvement ideas for the products or services we are selling".

3.2.2. Innovative Behaviour

To measure innovative behaviour, the innovative behaviour scale was adopted from De Jong, J., and Den Hartog, D. [97], consisting of 10 questions on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). Innovative behaviour was appraised by a ten-item scale (Cronbach's $\alpha = 0.926$), and the sample item was the following: "Do your colleagues pay attention to issues that are not part of his or her daily work".

3.2.3. Competitive Advantage

To measure competitive advantage, the competitive advantage scale was adopted from Zeb, J., and Gul, A. [98], consisting of five questions on a Likert scale from 1 (strongly disagree) to 5 (strongly agree). Competitive advantage was appraised using a five-item scale (Cronbach's $\alpha = 0.748$), and the sample item was the following: "How much you are satisfied with the market reputation of your company".

3.3. Statistical Analysis

This research examined common method bias (CMB) in the first phases of analysis to ascertain how the instrument's diversity in responses from participants compared to the participants' real tendencies. The CMB test result in this research was 0.4 (<0.5), indicating that there was no CMB in the data. This study analysed the mediating effects of innovative behaviour between the entrepreneurial leadership and competitive advantage. To test the hypotheses and determine the relative association between the variables under study, factor, correlation, and regression analyses were performed through Statistical Package for Social Sciences (SPSS) version 26. Using the bootstrapping tool Process Macro, the direct effects and the indirect effects of the mediating effects were measured to confirm the hypothesis. The validity and reliability of each item were determined using a confirmatory factor analysis (CFA), which was reported in this paper. Additionally, it assessed the goodness of the fit and offered a figure for structural equation modelling. The hypothesis analysis came next.

Demographic Profile—Frequency Tables

In order to provide an overview of the data that were collected, the information that was provided by the respondents is summarized by using fundamental descriptive statistics such as frequencies and percentages. According to the demographic profiles of the respondents in the study sample, the frequency and percentage of responses are presented in Table 1. It shows that there were more males (53.4%) than females (43.3%) in the sample. Regarding age, 1.8% of respondents were between 18 and 24 years of age; 12.4% of respondents were between 25 and 30 years of age; and more than half of the online questionnaire respondents (62.2%) were between 30 and 50 years of age, whereas 19.40% were between 50 and 60 and 2.1% were more than 60 years of age. The majority of the sample had completed higher education and attained a bachelor's or master's degree (91.6%) or a Ph.D. degree (2.1%), whereas 6.3% held only a high school degree. Of the respondents, 31.5% were from management levels, 63.8% were senior workers, and 4.8% were entry-level employees. A total of 10.5% of respondents had up to 1 year of experience in the present organization; 46.6% of respondents had 1–4 years of experience in the present organization; 39.4% of respondents had 5–10 years of experience in the present organization; and 3.4% of respondents had 10 or more years of experience in the present organization. Additionally, 3.7% of respondents had up to 1 year of experience in the sector; 12.7% of respondents had 1–4 years of experience in the sector; 47.9% of respondents had 5–10 years of experience in the sector; and 35.2% of respondents had 10 or more years of experience in the sector. Table 1 displays the key demographic information.

Table 1. Demographic profile of respondents.

		Frequency (N = 378)	Valid Percent (%)
Gender	Male	206	53.4
	Female	167	43.3
	Prefer not to say	5	3.3
Age	18–24	7	1.8
	25–30	48	12.4
	30–40	100	25.9
	40–50	140	36.3
	50–60	75	19.4
	60+	8	2.1
Education Level	High School	24	6.3
	Bachelor's Degree	241	63.8
	Master's Degree	105	27.8
	PhD	8	2.1
Job level	Management	119	31.5
	Senior worker	241	63.8
	Entry level	18	4.8
Years of Experience in present organization	Up to 1 year	40	10.5
	1–4 years	176	46.6
	5–10 years	149	39.4
	10 or more years	13	3.4
Years of Experience in sector	Up to 1 year	14	3.7
	1–4 years	48	12.7
	5–10 years	181	47.9
	10 or more years	135	35.2

Source: Survey results, 2023.

4. Results

4.1. Factor Analysis

After entering the data into the statistical program, the dataset underwent a cleaning process wherein any missing data points were removed. The ultimate sample size included a total of 378 participants. The present study used SPSS 26 and AMOS 26 software to perform confirmatory and exploratory factor analyses in order to assess the originality of the scales measuring entrepreneurial leadership, innovative behaviour, and competitive advantage.

Exploratory factor analysis (EFA) is a statistical technique used by researchers to decrease the number of factors in a dataset and identify correlations between them [99]. The inclusion criteria for this study were based on the suggestion made by Hair, J.F.; Black, W.C.; Babin, B.J.; and Anderson, R.E. [100], which stated that only items with a loading of 0.5 or greater on a single item should be included. The Kaiser–Meyer–Olkin (KMO) test yielded a value of 0.955, indicating a high level of sampling adequacy. Additionally, Bartlett's test of sphericity demonstrated statistical significance at a significance level of $p < 0.05$, suggesting that factor analysis is the appropriate method for analysing the provided data. The validation of the constructs included the use of confirmatory factor analysis (CFA).

In the confirmatory factor analysis (CFA) testing model, all factor loadings exhibited statistical significance ($p < 0.05$). The assessment of the model's fit was conducted based on many fit measures, which included the χ^2 goodness-of-fit test, comparative fit index (CFI), Tucker–Lewis index (TLI), and root mean square error of approximation (RMSEA). According to the findings shown in Table 2, it was determined that model 2 had positive features (χ^2 (df = 186) = 385.121, $p < 0.005$; Tucker–Lewis Index (TLI) = 0.937; comparative fit index (CFI) = 0.949; root mean square error of approximation (RMSEA) = 0.053). The results of this research provide support for the empirical nature of the three-factor model that was examined.

Table 2. Goodness-of-fit cut-off values.

Model	χ^2	df	χ^2/df	CFI	TLI	NFI	RMSEA
1	449.28	206	2.181	0.941	0.927	0.897	0.056
2	385.121	186	2.071	0.949	0.937	0.907	0.053

N = 378. CFI = comparative fit index; TLI = Tucker–Lewis index; NFI= normed fit index, RMSEA = root mean square error of approximation.

In the first model, all items of each variable were added and tested. In the second model, some items were excluded, and the analysis was repeated. The results showed that the second model was superior to the first model consisting of EL, IB, and CA (χ^2 = 385.121, df = 186, $p < 0.005$).

4.2. Test of Hypotheses

Table 3 presents the results of the descriptive statistics of the research variables, including the means, standard deviations, as well as the skewness and kurtosis data. A regression analysis was used to examine the proposed hypotheses. Hypothesis 1 proposed that the variable of EL would have a positive impact on the variable of CA. Table 4 shows the study variables' correlation coefficients and Cronbach's αlpha coefficients. All scale reliabilities (Cronbach's αlpha coefficients of all variables) were above the threshold of 0.7, and are shown in Table 4.

Table 3. Descriptive statistics.

Variable	N	Mean	Standard Deviation	Skewness	Kurtosis
EL	378	4.5498	0.45707	0.500	1.626
CA	378	4.5781	0.43565	0.040	1.852
IB	378	4.5749	0.51109	0.112	1.246

Note: ($p < 0.05$).

Table 4. Correlation and scale reliability of the variables.

Variables	EL	CA	IB
EL	*(0.863)*	0.595	0.669
CA	0.595	*(0.748)*	0.716
IB	0.669	0.716	*(0.926)*

Cronbach's αlpha coefficients appear *in parentheses* along the main diagonal. $p < 0.05$.

A regression-based statistical mediation analysis approach proposed by Hayes, A.F.; Montoya, A.K.; and Rockwood, N.J., [101] (Table 5) illustrates the disintegration of the influence of EL on CA into direct and indirect causal effects functioning through IB. The first step of the analysis revealed that demographic variables had no significant effect on competitive advantage. In step two, a significant direct effect of EL (β = 0.1999, $p < 0.05$) was detected, which provided support to H1, and there was also a significant indirect effect of IB (0.3669) between EL and competitive advantage. The mediation effect was significant in the model. The indirect effect (mediation effect) of EL on CA through IB was significant, and these results provided support for H2, H1a, and H1b. The total effect of EL (0.5668) showed that 56.68% of the change in CA was accounted for by EL and IB, which was always higher than the mediating effect of EL (0.3669) when IB (significant) was entered into the model. The model consisted of partial mediation because some of the impact of EL on CA passed through IB, and some of the impact of EL occurred directly on CA. Moreover, the signs of direct and indirect effects were the same, which makes the model complementary.

Table 5. Causal effects of EL and IB predicting CA and hypotheses results.

Hypothesis	Regression Path	Coefficient	*p*-Value	R	R2	Hypothesis Acceptance
H1	EL→CA (Direct Effect)	0.1999	0.000	0.7327	0.5368	Accepted
H2	EL→IB→CA (IndirectEffect)	0.3669	0.000	-	-	Accepted
H1a	EL→IB (Direct Effect)	0.7477	0.000	0.6687	0.4472	Accepted
H1b	IB→CA (Direct Effect)	0.4907	0.000	0.7327	0.5368	Accepted
	EL→CA (Total Effect)	0.5668	0.000	0.5947	0.3537	

Note: ($p < 0.05$).

CA was significantly predicted by EL (β = 0.1999). On the other hand, the direct effect of IB on CA was (β = 0.4907), and the direct effect of EL on IB was (β = 0.7477). When IB was incorporated into the model, the effect size on CA increased from β = 0.1999 to β = 0.3669, which shows that there was a significant mediation effect.

5. Discussion

Based on the RBV theory, this study explores the relationship between entrepreneurial leadership (EL) and competitive advantage (CA), focusing on the role of innovative behaviour (IB) as a mediator. A questionnaire survey was used to assess the model's hypotheses, and the study's findings validated each one. Along with examining study limitations and future research directions, the study also looks at theoretical contributions and their practical implications. The most precious asset of a business is its workforce, which is also crucial to employee management.

This study validates hypotheses through factor analyses, regression analysis, and PROCESS macro. It also highlights the importance of entrepreneurial leaders in stimulating employees' innovative behaviour, thus positively influencing attitudes towards adopting and implementing innovative initiatives [102]. The study found that entrepreneurial leadership positively influences a company's competitive advantage, aligning with Renko et al. [3]'s findings. Miles et al. (2000) [62] highlighted the importance of an entrepreneurial perspective for success in uncertain environments. Kimuli [61] emphasized the need for an entrepreneurial perspective, viewing uncertain environments as opportunities. Effective innovation facilitated by entrepreneurial leadership allows for quicker responses to environmental changes, leading to the introduction of new products with reduced time and cost, ultimately enhancing the firm's performance [78,103].

This research reveals that entrepreneurial leadership has a cumulative impact of 0.5668, which is greater than the indirect effect of innovative behaviour between entrepreneurial leadership and competitive advantage (0.3669). In addition, entrepreneurial leadership's direct effect is 0.199, which is less than innovative behaviour's indirect effect. The results of this study are consistent with the conclusions drawn by Bagheri and Akbari [104], who argued that entrepreneurial leadership plays a vital role in encouraging, inspiring, and fostering employees' innovative behaviours. This study contributed to the existing body of

research by investigating the mediating role of innovative behaviour in the relationship between entrepreneurial leadership and competitive advantage.

According to the results, leaders must help subordinates recognize and seize entrepreneurial opportunities if they are to earn a competitive advantage and accomplish corporate success via innovation in dynamic and complicated work environments. When leaders carry out their duties in accordance with entrepreneurial leadership principles, not only do they come up with innovative solutions to issues and deal with challenges, but they also value and support new ideas produced by employees and create approaches and strategies to encourage innovation and the identification of opportunities, which in turn empowers and encourages workers to challenge themselves and explore, generate, and implement new ideas [63]. As a result, the company gains a competitive advantage.

As the purpose of this study was to examine the relationship between entrepreneurial leadership and competitive advantage, effective innovation allows organizations to respond more quickly to environmental changes, which leads to the introduction of new products with less time and lower cost, ultimately increasing the efficiency of the organization [105]. This research provides unique evidence that entrepreneurial leaders enable employees to develop a sense of intellectual flexibility, recognize business problems, search for solutions, generate new valuable ideas, and propose innovative solutions, creating an innovative environment. Thus, this study can act as a recommendation for studying the ethnic decision-making capabilities of entrepreneurial leadership in other countries.

6. Conclusions

As organizations seem to heavily depend on the characteristics and skills of their owners, this specific study explored the impact of a crucial human factor, namely, EL, on the CA of enterprises in North Cyprus. The aim was to fill various significant gaps identified in the entrepreneurial literature and practices of businesses. Formun Üstü

Organizations will be able to survive if they maximize their employees' potential and effectively manage their human resources. In conclusion, the study proposed and tested a model explaining the relationships between EL, employees' IB, and CA, examining two supporting mechanisms. The results demonstrated that the EL style directly forecasts the CA of businesses and indirectly predicts CA through the innovative behaviour of employees. The findings can be utilized to educate leaders on the organizational effects of their leadership style.

6.1. Theoretical Implications

Based on the findings presented, this study contributes significantly to theory. The present study investigated the mechanism of the interaction that exists between entrepreneurial leadership, innovative behaviour, and competitive advantage, which has been largely overlooked in the literature. The scientific structure of the EL is described in this paper's quantitative analysis, and it has important direct and indirect implications for CA. Moreover, IB has a significant indirect effect on CA as a result of EL. According to the model proposed by the study, the current research expands our comprehension of the critical role of EL and IB in enhancing the CA of companies and emphasizes important management and leadership implications and recommendations. This study found that EL has a positive effect on the IB of manufacturing employees in North Cyprus, corroborating previous research [43]. Regardless of a company's size, type, or even structure, this type of leadership has an effect on its competitiveness, performance, and growth [3]. This study investigated a novel viewpoint by combining an entrepreneurial approach with RBV to explain why firms make entrepreneurial decisions in markets. Entrepreneurial leaders play a significant role in stimulating the IB of employees, and their attitudes positively influence the employee's capacity to adopt and implement innovative efforts [102].

First, by creating and testing a novel model that explains how EL supports CA via workers' innovation behaviour, this study contributes to the body of knowledge on EL. By proving that the IB of workers is a powerful factor that affects the entrepreneurial

leadership–competitive advantage procedure, this paper supports earlier studies [43,67,69]. Moreover, it is worth noting that the existing body of research on innovation lacks studies that specifically examine the influence of EL on the IB of employees. In addition, this study provides unique evidence that entrepreneurial leaders enable employees to develop a sense of intellectual agility, recognize business challenges, seek solutions, generate novel and valuable insights, and suggest innovative solutions by fostering an innovative environment. Leaders also continuously influence the work environment and set the tone for their organizations, including the innovation climate [106]. As a consequence, this study added EL to the leadership styles that encourage IB among employees [63,97].

Backes-Gellner and Werner [107] found that both generic and specific components of an entrepreneur's human capital have direct and indirect effects on the growth of a new business. The RBV perspective is considered relevant because businesses rely significantly on the characteristics and abilities of their proprietors. Consequently, entrepreneurial leaders can leverage resources (characteristics and skills) to explore and exploit opportunities, as well as to survive and to develop and attain CA. In addition, enterprise operating environments are characterized by uncertainty, necessitating the availability of competent human resources. Indeed, employee disengagement intentions and firm profitability are perceived to be highly dependent on the unique and irreplaceable resource that is an entrepreneur's leadership ability. Entrepreneurs who amass a high amount of human capital may increase a company's profitability and cultivate a loyal workforce.

6.2. Practical Implications

Furthermore, the findings of this study have far-reaching implications for current and future business leaders and entrepreneurs, who should encourage innovation among their employees to maximize their organizations' long-term development and competitiveness. Firstly, the findings of this study are extremely valuable for determining the role of business leaders and entrepreneurs in generating and guiding innovation within their organizations and in establishing the optimal environment for innovation within those organizations. In addition, leaders can use this study's findings as a basis for promoting EL in innovative settings that encourage employees to feel comfortable exchanging new ideas and concepts in a secure atmosphere. Moreover, entrepreneurship academicians can use the research's findings to assist both current and prospective business leaders in comprehending their new responsibilities and mandates, as well as developing their entrepreneurial leadership skills and abilities to lead innovation within their organizations [63]. Last, this research can be seen as an attempt to contribute to the understanding of the EL that leads to a firm's enhanced productivity and, thus, enhanced CA [108–113]. This concept has significant utility for researchers interested in the competitive advantages of businesses. Additionally, this research can be beneficial for local governments as a basis for developing regional manufacturing development policies by strengthening the manufacturing industry, encouraging innovation, and expanding sustainable businesses by creating a sustainable competitive advantage.

6.3. Limitations and Future Directions of Research

The study has some limitations that need to be handled. These are both limitations and opportunities for important future studies. First, the framework only takes EL into account as an antecedent. Future studies may compare EL and other leadership approaches to determine whether there are any differences in the outcomes or mediating factors. Another major flaw of the current study is the sample size. The study should be replicated in different cultural contexts in order to validate or challenge its findings because the research sample was restricted to North Cyprus. Future studies should evaluate the model for people of different races to establish its generalizability, even if, based on the current data, rectifying for individual variations had no discernible impact on the model. Future studies may also deepen our understanding of the connection between EL and CA by examining various mediators. Finally, while this study focused on the innovative behaviour of workers

as a mediator, it also strongly recommends that future studies examine the moderating effect of innovative behaviour.

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Informed Consent Statement: Not applicable.

Data Availability Statement: The datasets used and/or analysed during the current study are available from the corresponding author upon reasonable request.

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