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## The Competitive Advantage in the Car Rental Industry in the United States: A Comparison Study Between the Three Major Car Rental Companies

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### Abstract

This paper articulates and examines the factors that lead to and sustain the competitive advantage in the US car rental industry. A quantitative approach was adopted to collect data from companies' financial statements. Preliminary data analysis, descriptive analysis, visualization, and ANOVA were used to analyze the competitive advantage variables in the proposed research models. The study indicates that Avis has the highest market share and profit margin, while Enterprise excels in fleet size and research and development investments. Hertz, on the other hand, is struggling to establish a foothold in the competitive market. Continuous adaptation to market changes, technological disruptions, and sustainability trends is essential for these corporations to maintain their competitive edge. Overall, the findings of this research will help corporations re-formulate and implement effective organizational strategies to cope with the brutal competition in the car rental industry and other industries.

**Keywords:** competitive advantage, automotive industry, firm-specific advantage, financial performance

### Introduction

Competitive advantage is a central concept in strategic management and business analysis. Although defining competitive advantage is problematic, it broadly refers to a company's ability to outperform its competitors. This ability manifests in various ways, including offering superior value to customers, achieving cost efficiencies, or differentiating products and services (Wen-Cheng et al., 2011). A firm that successfully establishes a competitive advantage benefits in numerous ways, such as securing a stronger market position, achieving higher profitability, and ensuring long-term sustainability. Building and maintaining it is a fundamental strategic management task as it enables an enterprise to achieve above-average results of its business activities (Cegliński, 2017). Many strategic and operational factors hinder firms operating in a highly competitive environment from maintaining a competitive edge over their competitors. Overcoming these obstacles requires understanding the determinants of competitive advantage to gain the strategic insight needed, navigate the dynamics of competition, and enhance competitive positioning (Safitri & Miranda, 2024). Accordingly, this article examines the concept of competitive advantage and its key determinants in the car rental industry, providing insights into how major players sustain their competitive edge and adapt to industry challenges.

The car rental industry plays a crucial role in global transportation. It provides short-term vehicle access to a diverse customer base, including tourists, business travelers, and individuals needing temporary transportation solutions (Akay, 2024). The industry emerged in the early 20th century, beginning as a straightforward business where car rental agencies rented their vehicles to customers for a fee. This was primarily driven by the increasing popularity of automobiles and the demand for convenient mobility solutions (Gierczak-Korzeniowska, 2020). Over time, it evolved into a well-structured market with multiple service models, including airport rentals, local rental branches, corporate leasing programs, and long-term vehicle subscriptions. Technological advancements have significantly transformed the industry over the past few decades. For instance, adopting digital booking platforms and mobile applications has enhanced customer convenience and operational efficiency (Al Basith et al., 2024). Many rental corporations today leverage artificial intelligence, dynamic pricing models, and telematics to optimize fleet utilization and improve profitability.

Remaining competitive in the car rental industry is challenging for many players due to the risks posed by the external business environment and shifting consumer preferences. Economic and environmental factors pose significant challenges. For instance, fuel price volatility directly affects rental costs, while broader economic downturns can reduce consumer spending on travel, which, in turn, affects demand for rental services (Alkharabsheh et al., 2025). Similarly, changing environmental regulations and sustainability initiatives are influencing fleet composition. Corporations are gradually integrating electric and hybrid vehicles to meet emissions standards and appeal to environmentally conscious consumers. Moreover, emerging trends are redefining the competitive landscape. For example, the growing consumer preference for ride-sharing services and car-sharing platforms highlights the need for corporations to adopt innovative strategies (Soppert et al., 2024). The rise of mobility-as-a-service (MaaS) solutions, which integrate multiple transportation options into a single platform, suggests the importance of utilizing technology-driven, customer-centric models.

The car rental industry in the United States is integral to the transportation sector. It serves leisure and business travelers, with Hertz Global Holdings, Avis Budget Group, and Enterprise Holdings as dominant players. Collectively, these corporations shape the industry's competitive landscape by operating extensive networks of rental locations, including airport-based and off-airport branches, and by offering a diverse range of vehicle options to meet consumer needs. Founded in 1918 in Chicago, Hertz is one of the world's most recognizable car rental brands. With its main headquarters in Estero, Florida, Hertz operates under multiple brands, including Dollar and Thrifty (Parsons, 2023). It has a strong



presence in major airports and urban centers, offering a mix of economy, luxury, and specialty vehicles. It has undergone financial restructuring recently and expanded into electric vehicle (EV) rentals to align with the growing trend towards sustainability.

Based in Parsippany, New Jersey, Avis Budget Group manages the Avis, Budget, and Zipcar brands. Avis primarily caters to business travelers and premium customers, while Budget targets cost-conscious consumers (Avis Budget Group, 2025). The company also operates Zipcar, a car-sharing service that allows members to rent vehicles by the hour. Avis Budget has emphasized digital transformation, integrating mobile apps and AI-driven fleet management to streamline operations and improve customer experience.

Enterprise Holdings is a privately held company headquartered in St. Louis, Missouri. It is the largest of the three in fleet size and locations. It operates Enterprise Rent-A-Car, National Car Rental, and Alamo Rent-A-Car (Enterprise Holdings, Inc., n.d.). It caters to a broad customer base, from daily renters to corporate clients. Unlike Hertz and Avis, Enterprise has a significant presence off-airport, particularly in suburban and neighborhood locations. This presence makes it a preferred choice for long-term and insurance replacement rentals. Enterprise also offers leasing and car-sharing services.

## Literature Review

### Firm-specific advantages

#### 1. Market Share

Market share is a critical determinant of competitive advantage in the US car rental industry. It reflects a company's ability to attract and retain customers. A higher market share correlates with stronger brand recognition, customer loyalty, and economies of scale. This share can lead to lower per-unit costs and increased profitability. Enterprise Holdings leads the industry, controlling over 30% of the market (Komeyshi, 2024). It holds the largest share due to its extensive off-airport rental network and strong partnerships with insurance companies. Hertz and Avis, while dominant at airports, compete fiercely to maintain and expand their share through pricing strategies and customer service enhancements. Hertz holds around 15-20%, while Avis has around 20% of the US market share (Komeyshi, 2024). Research suggests that firms with greater market share can negotiate more favorable fleet-acquisition deals with automakers, thereby further strengthening their cost advantages (Rísquez Ramos & Ruiz-Gálvez, 2024). Moreover, a larger market share enables firms to invest in emerging trends, such as electric vehicles (EVs) and car sharing, positioning them favorably against new entrants. However, market fluctuations, such as the impact of the COVID-19 pandemic, have tested the stability of these companies, underscoring the need for adaptability to sustain market dominance.

#### 2. Profit Margin

Profit margin is a fundamental indicator of financial health and competitive positioning. It is the percentage of revenue that a company retains as income after deducting expenses. Operational efficiency, fleet management strategies, and pricing power influence profit margins in this industry. Since Enterprise Holdings is a privately owned company, it does not publicly disclose its financial data. However, reports indicate that its focus on neighborhood rentals yields stable, long-term profitability (Ananthalakshmi, 2012). Hertz and Avis, as publicly traded entities, must balance shareholder expectations with cost management. In 2024, Hertz recorded a loss of \$1.326 billion, while Avis had a profit of \$628 million. Profitability in the rental industry is highly dependent on vehicle depreciation, fleet utilization rates, and ancillary revenue streams, such as insurance and add-on services. Studies suggest that corporations with superior profit margins can reinforce their competitive edge by reinvesting in fleet expansion and technological innovation (Tolossa et al., 2024). Hertz and Avis have faced challenges due to rising vehicle acquisition costs and fluctuating travel demand. However, their ability to adjust pricing and implement dynamic yield management strategies has helped them maintain financial stability. Therefore, maintaining a healthy profit margin allows these firms to weather economic downturns and invest in future growth opportunities.

#### 3. Fleet Size

Fleet size is a crucial determinant of service availability, operational efficiency, and competitive positioning in the car rental industry. Enterprise Holdings has the largest fleet in the US, with over 745,726 vehicles under its management as of 2022 (Bland, 2022). This massive fleet size allows it to meet high customer demand across diverse locations, including airports and suburban areas. This extensive fleet also enables Enterprise to cater to long-term rentals and corporate leasing agreements, increasing revenue stability. Hertz and Avis maintain large but relatively minor fleets, focusing on premium and airport-based rentals. The literature on fleet management suggests that a well-optimized fleet enhances cost efficiency and reduces vehicle depreciation risk, two major cost drivers in the rental business (Akkartal & Aras, 2021).

Furthermore, fleet diversity, including hybrid and electric vehicles, has become a differentiator as sustainability gains importance among consumers. Corporations that effectively manage their fleet turnover — ensuring the right mix of new and used cars — can maximize residual value and minimize operational costs. This, in turn, reinforces their competitive advantage in the industry.

#### 4. Human Capital Efficiency

Human capital efficiency — encompassing workforce productivity, training, and customer service — plays a pivotal role in the competitive positioning of car rental companies. Enterprise Holdings is widely recognized for its management trainee program. This program develops internal talent and fosters leadership from within. This strategy ensures a strong customer service culture and operational consistency, contributing to its dominant market position. While investing in workforce development, Enterprise and Avis rely more heavily on automation and self-service technologies to enhance efficiency. Research suggests that corporations with well-trained employees and high engagement levels experience greater customer satisfaction and brand loyalty (Rane et al., 2023). Moreover, the shift toward digital interactions, including AI-powered customer support and self-checkout kiosks, has streamlined operations and reduced labor costs. Balancing human capital investment with technological efficiency is key to maintaining competitiveness. It becomes even more crucial in an industry where service quality directly influences repeat business and customer retention.

#### 5. Research and Development

Research and development (R&D) investment has become a defining factor in sustaining competitive advantage in the car rental industry. Enterprise, Hertz, and Avis have increasingly focused on technological advancements such as AI-driven fleet management, predictive maintenance, and mobile app-based booking systems. Hertz, for example, has made significant strides in integrating electric vehicles into its fleet and has formed partnerships with manufacturers like Tesla to differentiate its offerings. Avis has emphasized digital transformation, leveraging AI to enhance fleet utilization and customer service efficiency (High, 2024). Literature on strategic management highlights that firms that invest in innovation improve operational efficiency and create new revenue streams and customer engagement models (Adewumi et al., 2024). Adopting connected vehicle technology, telematics, and automated rental processes has further streamlined operations, reduced costs, and enhanced user experience. In an evolving industry landscape, firms that prioritize R&D remain well-positioned to adapt to market disruptions and sustain long-term stability.

#### Materials and Methods

Quantitative research is a type of research that involves directly measurable data, typically presented in the form of descriptions or explanations stated in figures or numerical forms (Suliyanto, 2017). This research tests the competitive advantage and performance of the three major car rental industries in the United States. This research examines the financial performance and firm-specific advantages of car rental corporations in the US, accounting for key factors such as market share, profit margins, fleet size, human capital efficiency, and research and development expenditures. This research utilizes secondary data obtained from the yearly reports of the major car rental corporations selected as the sample from 2000 to 2024. The analysis of data from the financial statements of the three major car rental corporations used several basic statistical techniques. This research obtains three methodological approaches. The first visualization will help to gain a deep understanding of the competitive advantage of each company (Chen, Floridi & Borgo, 2014); the second approach is ANOVA analysis, which will help to understand the differences between the groups and help to identify if there are any variations between the three major car rental industries.

The research deals with the following questions:

1. Why do corporations have low profit margins, and what steps do they need to take to increase their profit margins and market share? How does this affect their competitive advantage?
2. How does constant corporate restructuring and senior management changes affect companies' short-term, mid-term, and long-term goals?
3. How does R&D investment in a corporation's operations positively impact its competitive advantage in the market?
4. How is low human capital efficiency in a company often due to a lack of emotional commitment to the organization, as well as organizational factors such as ineffective management, inadequate leadership, insufficient compensation, and poor work design?
5. What factors, such as fleet size, human capital efficiency, profit margin, R&D, and market share, will maintain or sustain a competitive advantage in the market?

#### Results and discussion

The section presents data analysis and research findings for the study. First presents visualization

##### 1. Visualization

##### A. Market Share

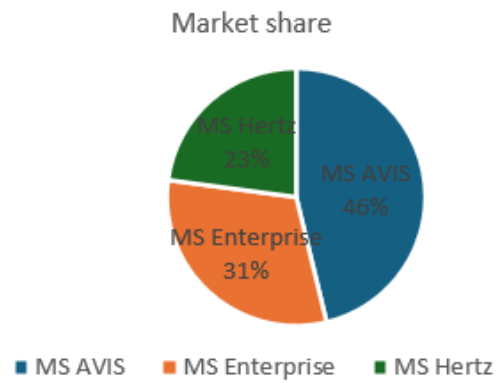


Figure1. The market share for the car rental companies. Retrieved from the companies' financial statements

**B. Profit Margin**

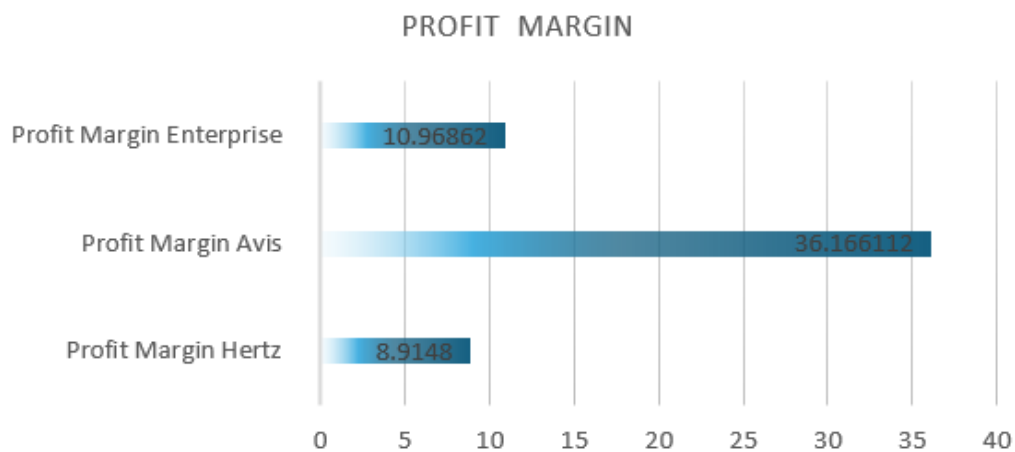


Figure2. Profit margin for the car rental companies. Retrieved from the companies' financial statements

**C. Fleet size**

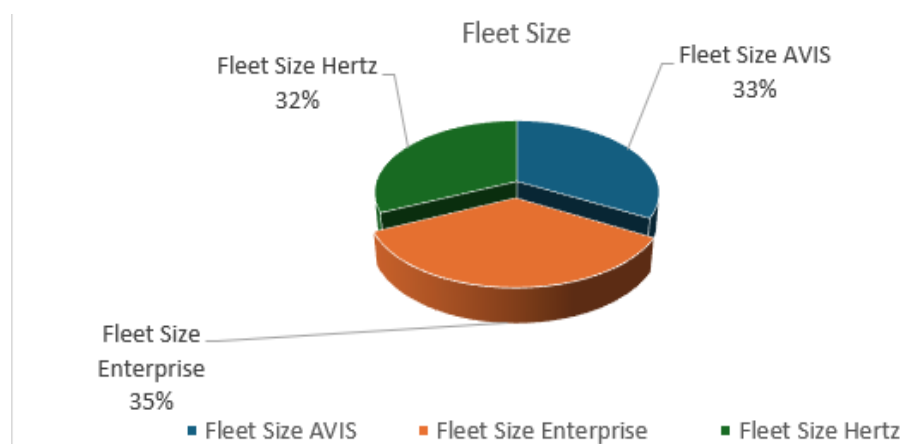


Figure3. Fleet size of rental companies. Retrieved from the companies' financial statements

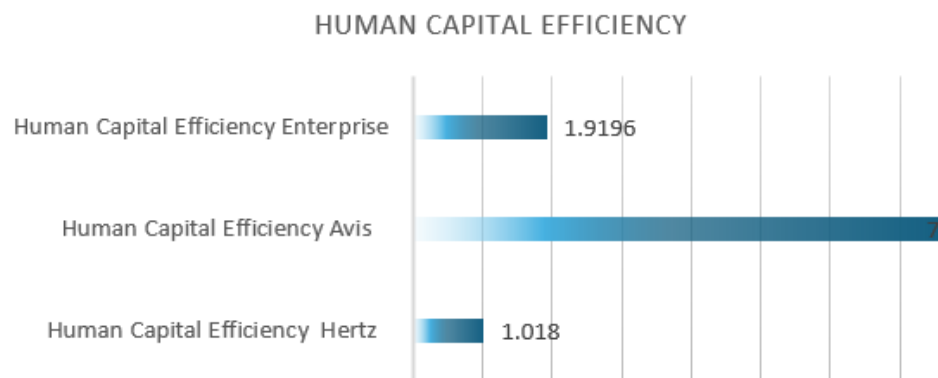
**D. Human Capital Efficiency**

Figure4. Human Capital Efficiency of rental companies: Source Arthers' research

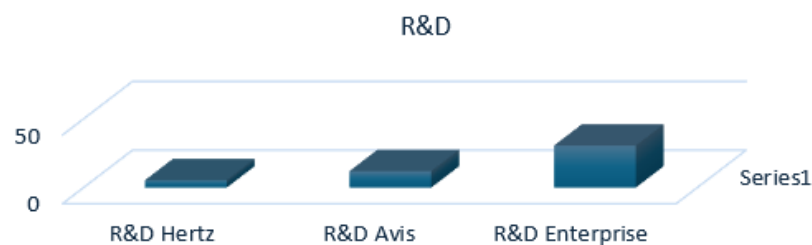
**E. Research and Development**

Figure5. R&amp;D of rental companies. Retrieved from the companies' financial statements

**2. ANOVA analysis****A. Market Share**

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
MSAVIS	25.00	776.31	31.05	73.61		
MS Hertz	25.00	384.55	15.38	46.17		
MS Enterprise	25.00	518.84	20.75	73.28		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3170.60	2.00	1585.30	24.63	0.00	3.12
Within Groups	4633.44	72.00	64.35			
Total	7804.04	74.00				

Table 1. The results of the ANOVA on the companies' market share

**B. Profit Margin**

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Profit Margin Hertz	25	222.87	8.91	5.81		
Profit Margin Avis	25	904.15	36.17	52.71		
Profit Margen Enterprise	25	274.22	10.97	2.75		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	11514.7149	2	5757.36	281.92	0.00	3.12
Within Groups	1470.38713	72	20.42			
Total	12985.102	74				

Table 2. The results of the ANOVA on the companies' profit margin

**C. Fleet Size**

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Fleet Size AVIS	25	155.85	6.23	0.02		
Fleet Size Enterprise	25	160.86	6.43	0.16		
Fleet Size Hertz	25	147.81	5.91	0.11		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	3.47	2	1.73	17.72	0.00	3.12
Within Groups	7.05	72	0.10			
Total	10.52	74				

Table 3. The results of the ANOVA on the companies' fleet size

**D. Employee Efficiency**

Anova: Single Factor						
SUMMARY						
Groups	Count	Sum	Average	Variance		
Human Capital Efficiency	25	25.45	1.02	3.58		
Human Capital Efficiency	25	189.19	7.57	21.07		
Human Capital Efficiency	25	47.99	1.92	3.05		
ANOVA						
Source of Variation	SS	df	MS	F	P-value	F crit
Between Groups	630.083723	2	315.04	34.11	0.00	3.12
Within Groups	664.930152	72	9.24			
Total	1295.01387	74				

Table 4. The results of the ANOVA on the companies' employee efficiency



## E. Research and Development

Anova: Single Factor					
SUMMARY					
Groups	Count	Sum	Average	Variance	
R&D Hertz	25	133.99	5.36	22.95	
R&D Avis	25	299.43	11.98	164.51	
R&D Enterprise	25	764.22	30.57	241.41	
ANOVA					
Source of Variation	SS	df	MS	F	P-value
Between Groups	8541.20	2	4270.60	29.87	0.00
Within Groups	10293.13	72	142.96		
Total	18834.33	74			

Table 5. The results of the ANOVA on the companies' R&D

The ANOVA tables above were determined by grouping the determinants for the three car rental corporations in the US. Then, ANOVA tests were conducted for each corporation to identify differences in performance. When analyzing the ANOVA test results (Table 1), it is evident that the P-value for the car rental corporations' market share is 0.00, which is less than the significance level (0.05). This provides clear evidence that the means used by car rental corporations differ. Additionally, when examining Figure 1, we conclude that Avis has the highest market share (31.05%) among the three direct competitors, Hertz (15.38%), Enterprise (20.75%), and Avis (31.05%).

Also, when looking at Table (2) and compare the P-value of profit margin of the three corporations is (0.00) to the level of significance value (0.05), there is clear evidence that the means of the three major car rental corporations are different from each other, and Avis has the highest profit margin of (36.17%) then Enterprise (10.97%), and Hertz (8.91%) as figure 2 shows. Furthermore, as shown in Table 3 below, the P-value (0.00) is less than the significance value (0.05), indicating that the means of the three car rental corporations are statistically different. The Table shows that Enterprise has the highest fleet size, followed by Avis and Hertz at (6.43, 6.23, and 5.91), respectively, as shown in Figure 3.

Table 4 shows that the average employee efficiency across the three multinational corporations differs significantly, as indicated by the P-value (0.00) being lower than the significance level (0.05). Avis employees are more efficient than those at Enterprise and Hertz, with scores of 7.57, 1.92, and 1.02, respectively, as shown in Figure 4.

Finally, Table 5 shows that the mean for the Hertz, Avis, and Enterprise is statistically different due to the P-value of 0.00 being smaller than the level of significance (0.05); Also, it shows that Enterprise is leading the research and development aspect by far at (30.57%) compared to Avis at (11.98%), and Hertz at (5.36%), as shows in Figure 5 above.

The section answers the research questions.

1. Why do corporations have low profit margins, and what steps do they need to take to increase their profit margins and market share? How will this affect their competitive advantage?

Corporations experience low profit margins primarily due to insufficient market share, ineffective cost management, and misleading profitability measurement approaches. Corporations with smaller market shares face significant disadvantages: those holding less than 10% of the market share record average pretax losses of 0.16%, compared with substantial profits for market leaders. The main reason is that they lack economies of scale in procurement, manufacturing, and marketing (Wichmann et al., 2024). Ineffective expense tracking and failure to cut operating costs directly impact profitability, as corporations that do not monitor spending cannot effectively reduce expenses (Hamingson, 2024). Many organizations rely on contribution margin analysis rather than fully allocated profit calculations, which often perpetuates unprofitable activities by masking actual losses and providing misleading signals about product profitability (Milano, 2023). These factors create cycles where corporations struggle to achieve sustainable profitability.

To increase profit margins and market share, corporations must implement strategic approaches that address cost reduction and revenue enhancement. Organizations should focus on tracking and cutting operational expenses, as controlling costs directly impacts the bottom line (Hamingson, 2024). Additionally, corporations should invest in building market share through new product introductions and enhanced marketing programs, although it requires accepting short-term profitability sacrifices for long-term gains (Wichmann et al., 2024). Market leaders typically pursue product leadership strategies, investing heavily in research and development while maintaining higher-quality offerings that command premium prices.

The relationship between market share and competitive advantage is powerful because greater market share confers multiple benefits, including economies of scale, enhanced market power, and superior management capabilities (Wichmann et al., 2024). However, corporations must move beyond simple contribution margin analysis to understand true profitability, as this measure often masks unprofitable activities and provides misleading signals for resource allocation decisions (Milano, 2023). By implementing comprehensive profit analysis and focusing on building market position, corporations can create sustainable competitive advantages that translate into improved financial performance.

2. How does constant corporate restructuring and senior management changes affect companies' short-term, mid-term, and long-term goals?

Constant corporate restructuring and senior management changes lead to immediate operational disruptions, severely impacting short-term goals. Corporations experience declining employee morale, increased stress levels, and reduced productivity as workers struggle to adapt to new organizational structures (Rogovsky et al., 2005). The immediate aftermath is marked by confusion about roles, potential talent flight, and a decreased focus on core business activities as resources are diverted toward managing transitions rather than achieving quarterly targets and operational objectives.

In the medium term, while restructuring can yield positive results, constant changes prevent corporations from achieving the stability necessary for sustained performance. Research indicates that corporate restructuring episodes are typically associated with improved economic growth and investment productivity over time (Shin, 2017). However, when restructuring becomes perpetual rather than strategic, corporations struggle to implement and achieve results from their initiatives, making it challenging to meet medium-term goals such as market expansion and process optimization.

Long-term strategic objectives are most significantly affected by constant restructuring and management turnover. Corporations become trapped in cycles of disruption that prevent organizational learning and strategic consistency necessary for sustained competitive advantage. While successful reorganization can lead to improved capital productivity and growth, frequent changes undermine the stability required for innovation, brand building, and market leadership, ultimately preventing corporations from achieving their long-term vision and strategic positioning goals (Shin, 2017).

3. How does R&D investment in a corporation's operations positively impact its competitive advantage in the market?

Research and development (R&D) investment is a critical catalyst for building sustainable competitive advantage in today's dynamic business environment. Corporations that allocate resources to R&D activities gain access to valuable, rare, and difficult-to-replicate resources that differentiate them from their competitors, aligning with the principles of resource-based theory (Insee & Suttipun, 2023). Research and development spending enables organizations to develop innovative products, enhance existing processes, and establish technological capabilities that are challenging for competitors to replicate. The development of firm-specific knowledge through R&D activities becomes an intangible asset that provides lasting competitive benefits. Furthermore, R&D investment facilitates the creation of unique products and services that meet evolving customer needs while reducing production costs through process innovations. This dual benefit of differentiation and cost optimization positions corporations favorably against competitors who lack similar R&D capabilities (Singh, 2024).

The strategic implementation of R&D initiatives directly translates into multiple dimensions of competitive advantage, including differentiation, cost leadership, and market positioning. Corporations that invest in R&D can develop distinctive products and services that command premium pricing, while also establishing barriers to entry for potential competitors (Farida & Setiawan, 2022). R&D activities foster innovation cultures within organizations, encouraging creative thinking and continuous improvement that extend beyond immediate product development. The innovation resulting from R&D investments enables corporations to respond quickly to market changes, capture emerging opportunities, and maintain technological leadership in their industries. Additionally, sustained R&D investment creates cumulative competitive advantages as corporations build upon previous innovations, developing increasingly sophisticated capabilities that become progressively more difficult for competitors to replicate or surpass.

4. How is low human capital efficiency in a company often due to a lack of emotional commitment to the organization, as well as organizational factors such as ineffective management, inadequate leadership, insufficient compensation, and poor work design?

Low human capital efficiency in organizations frequently stems from inadequate emotional commitment among employees, which manifests through reduced workplace engagement and diminished performance outcomes. When employees lack strong emotional bonds to their organization, they exhibit lower levels of motivation and creativity, as well as a reduced willingness to contribute beyond basic job requirements (Zhenjing et al., 2022). This emotional disconnect significantly impacts overall productivity, as employees become less invested in achieving organizational goals. The absence of emotional commitment creates a cycle in which reduced employee engagement leads to lower performance, which, in turn, affects the organization's ability to optimize its human resources.



Ineffective management practices and poor leadership represent critical organizational factors that substantially contribute to low human capital efficiency. Management deficiencies, including a lack of strategic vision, poor decision-making, and inadequate communication skills, directly undermine employee performance and organizational effectiveness (Aboyasin & Abood, 2013). Additionally, ineffective leadership characteristics, such as prioritizing self-interest over organizational goals, committing ethical violations, and failing to inspire teams, create adverse workplace environments that diminish employee commitment and productivity. These leadership failures cascade throughout the organization, resulting in decreased employee morale, higher turnover rates, and ultimately reduced human capital efficiency.

In addition, work design is often poor, compensation structures are insufficient, and organizational failures are widespread, contributing to inefficiencies in human capital within companies. Employee dissatisfaction and low performance levels are attributed to inadequate workspaces, unfair compensation, and poorly structured job roles (Hariyani et al., 2024). Failing to resolve these systemic issues results in declining productivity, rising employee turnover, and an inability to attract (or retain) the best and the brightest in the field. These organizational factors prevent human capital from being effectively exploited, resulting in suboptimal performance and even organizational failure.

5. How do factors, such as fleet size, human capital efficiency, profit margin, R&D, and market share, maintain or sustain a competitive advantage in the market?

In today's ever-changing business environment, fleet size optimization and human capital efficiency are fundamental components of maintaining a competitive advantage. Fleet management practices, including proper repair and maintenance, fuel management, and driver training, directly enhance service delivery and operational efficiency (Kraa, 2020). At the same time, organizations should utilize their human capital as a long-term competitive advantage by building knowledge-based capabilities and promoting innovation among employees. Corporations can deliver superior customer value while maintaining operational excellence and cost-effectiveness in their market positioning by strategically aligning their fleet operations with skilled human resources, thereby generating synergies.

Long-term competitive sustainability strongly depends on R&D investments and strategic market positioning. The heart of innovative organizations lies in R&D, where product and service development distinguishes them from competitors and enables them to meet changing customer demands and market requirements (Regina & Raharjo, 2022). In other words, corporations that maintain sufficient profit margins to invest in R&D capabilities can continuously innovate and adapt to changing market conditions. This strategic approach enables organizations to create unique value propositions that are challenging for competitors to commoditize, erect barriers to entry, and maintain leadership in the market through cycles of innovation.

All competitive advantage factors must be integrated to maintain market share through comprehensive strategic management approaches. To be successful in the market and sustainable, organizations must consider fleet efficiency, human capital development, research and development (R&D) investments, and profit growth (Hitka et al., 2019). When the elements of the supply chain are well coordinated, corporations can respond more efficiently to competitive pressures, adapt to technological changes, and better meet customer expectations. The factors involved are interconnected, creating a sustainable competitive framework that enables organizations to remain in the market while developing their operational capabilities and strategic responses to environmental challenges.

## Conclusion

The primary objective of this research is to identify the competitive advantage and performance of the three major car rental industries in the United States. This research examines the financial performance and firm-specific advantages of car rental corporations in the US, accounting for key factors such as market share, profit margins, fleet size, human capital efficiency, and research and development expenditures.

Competitive advantage remains a critical determinant of success, not only in the car rental industry but in all industries. It shapes a firm's ability to navigate market complexities and sustain profitability. This paper has examined key factors influencing competitive positioning, including market share, profit margins, fleet size, human capital efficiency, and research and development investments. The analysis highlights that dominant players leverage strategic resources and operational efficiencies to maintain market leadership. However, the industry's evolving landscape—marked by technological disruptions, shifting consumer preferences, and economic uncertainties—necessitates continuous adaptation. Corporations that effectively integrate innovation, optimize fleet management, and enhance customer service will remain resilient amid competitive pressures. As sustainability concerns and mobility trends reshape the sector, rental firms must embrace forward-looking strategies to ensure long-term viability. Therefore, competitive advantage in the car rental industry is not static but requires ongoing strategic refinement to respond to emerging challenges and opportunities.

In summary, the visualization and ANOVA analyses reveal that each of the key performance determinants—market share, profit margin, fleet size, employee efficiency, and research and development—demonstrates statistically significant differences among Avis, Hertz, and Enterprise. These findings highlight Avis's leadership in market share, profit margin,

and employee efficiency, Enterprise's dominance in fleet size and research and development, and Hertz's more modest standing across most metrics. The distinct strengths and weaknesses of each company emphasize the competitive landscape of the US car rental sector and underscore the value of targeted strategies to enhance performance in specific areas.

## References

- Aboyasin, N. A., & Abood, N. (2013). The effect of ineffective leadership on individual and organizational performance in Jordanian institutions. *Competitiveness Review: An International Business Journal*, 23(1), 68–84. <https://doi.org/10.1108/10595421311296632>
- Adewumi, A., Ewim, S. E., Sam-Bulya, N. J., & Ajani, O. B. (2024). Strategic innovation in business models: Leveraging emerging technologies to gain a competitive advantage. *International Journal of Management & Entrepreneurship Research*, 6(10), 3372–3398. <https://doi.org/10.51594/ijmer.v6i10.1639>
- Akay, B. (2024). Bibliometric analysis of carsharing and car rental research in the field of urban transportation and tourism transportation. *Journal of Multidisciplinary Academic Tourism*, 9(2), 113–126. <https://doi.org/10.31822/jomat.2024-9-2-113>
- Akkartal, E., & Aras, G. Y. (2021). Sustainability in fleet management. *Journal of Advanced Research in Economics and Administrative Sciences*, 2(3), 13–39. <https://doi.org/10.47631/jareas.v2i3.288>
- Al Basith, M. P., Myrtle, S. R., Durai, M. M., & Sudalaimuthu, M. (2024). Car rental management system. *International Journal of Novel Research and Development*, 9(5), b432–b439. <https://www.ijnrd.org/papers/IJNRD2405158.pdf>
- Alkharabsheh, O. H., Fong, P. W., Alzoubi, R. H., Peng, L. P., Qian, P. Y., & Shahid, M. K. (2025). Analysing consumer preference factors and their impact on willingness in vehicle leasing in Malaysia. *Issues and Perspectives in Business and Social Sciences*, 1–13. <https://journals.mmupress.com/index.php/ipbss/article/view/1115>
- Ananthalakshmi, A. (2012, October 12). *Dominant in the US, Enterprise Holdings looks offshore*. reuters.com. <https://www.reuters.com/article/business/dominant-in-the-us-enterprise-holdings-looks-offshore-idUSBRE89B11Y/> and *Education*, 5(2), 2165–2176. <https://doi.org/10.56442/ijble.v5i2.800>
- Avis Budget Group. (2025, January 3). *About us*. Retrieved March 13, 2025, from <https://www.avisbudgetgroup.com/about-us/>
- Bland, D. (2022, August 24). *Unraveling North America's vehicle fleet management leaders in 2022*. Global Fleet. Retrieved March 13, 2025, from <https://www.globalfleet.com/en/leasing-and-rental/north-america/analysis/unraveling-north-america-vehicle-fleet-management-leaders-2022>
- Cegliński, P. (2017). The concept of competitive advantages. Logic, sources, and durability. *Journal of Positive Management*, 7(3), 57–70. <https://doi.org/10.12775/jpm.2016.016>
- Enterprise Holdings, Inc. (n.d.). *About us*. Retrieved March 13, 2025, from <https://www.enterprise.com/en/about.html>
- Farida, I., & Setiawan, D. (2022). Business strategies and competitive advantage: The role of performance and innovation. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(3), Article 163. <https://doi.org/10.3390/joitmc8030163>
- Gierczak-Korzeniowska, B. (2020). Tourist and business models in customer mobility: Losing car rental services. *Geography and Tourism*, 8(2), 29–39. <https://doi.org/10.36122/GAT20200813>
- Hamingson, N. (2024, April 15). *What should your profit margins be? Understanding your profit margins can help you understand your business's financial health and growth potential*. Business News Daily. <https://www.businessnewsdaily.com/11096-determining-profit-margins.html>
- Hariyani, D., Hariyani, P., Mishra, S., & Sharma, M. K. (2024). Causes of organizational failure: A literature review. *Social Sciences & Humanities Open*, 10, Article 101153. <https://doi.org/10.1016/j.ssaho.2024.101153>
- High, P. (2024, November 7). *Avis Budget Group's strategy for AI, innovation, and customer focus*. Forbes. Retrieved March 13, 2025, from <https://www.forbes.com/sites/peterhigh/2024/11/07/avis-budget-groups-strategy-for-ai-innovation-and-customer-focus/>
- Hitka, M., Kucharčíková, A., Štarchoň, P., Balážová, Ž., Lukáč, M., & Stacho, Z. (2019). Knowledge and human capital as a sustainable competitive advantage in human resource management. *Sustainability*, 11(18), Article 4985. <https://doi.org/10.3390/su11184985>

- Insee, K., & Suttipun, M. (2023). R&D spending, competitive advantage, and firm performance in Thailand. *Cogent Business & Management*, 10(2), Article 2225831. <https://doi.org/10.1080/23311975.2023.2225831>
- Komeyshi, S. (2024, November 21). *Car rental industry: Companies, market size, and growth*. Focalx - AI-Powered Inspection. Retrieved March 13, 2025, from <https://focalx.ai/car-rental/car-rental-industry-companies-market-size-and-growth/>
- Kraa, J. (2020). Examining the effect of fleet management on competitive advantage in the transport industry. *European Journal of Logistics, Purchasing and Supply Chain Management*, 8(2), 7–23. <https://www.eajournals.org/wp-content/uploads/Examining-the-effect-of-fleet-management-on-competitive-advantage-in-the-transport-industry.pdf>
- Milano, G. (2023, June 15). Why is the contribution margin an ineffective measure of profitability? *Forbes*. <https://www.forbes.com/councils/forbesbusinesscouncil/2023/06/15/why-contribution-margin-is-an-ineffective-measure-of-profitability/>
- Parsons, M. (2023, February 7). *Hertz is revamping Dollar and Thrifty brands*. Skift. Retrieved March 13, 2025, from <https://skift.com/2023/02/07/hertz-is-revamping-dollar-and-thrifty-brands/>
- Rane, N. L., Achari, A., & Choudhary, S. P. (2023). Enhancing customer loyalty through quality of service: Effective strategies to improve customer satisfaction, experience, relationship, and engagement. *International Research Journal of Modernization in Engineering Technology and Science*, 5(5), 427-452. <https://doi.org/10.56726/IRJMETs38104>
- Rapier, R. (2023, October 31). Hertz hurt by electric vehicle challenges. *Forbes*. <https://www.forbes.com/sites/rrapier/2023/10/31/hertz-hurt-by-electric-vehicle-challenges/>
- Regina, C., & Raharjo, S. (2022). The Role of Research and Development and achieving Sustainable Competitive Advantage *International Journal of Business Management and Technology*, 6(6), 1–8. <https://www.theijbmt.com/archive/0948/848468192.pdf>
- Rísquez Ramos, M., & Ruiz-Gálvez, M. E. (2024). The transformation of the automotive industry toward electrification and its impact on global value chains: Inter-plant competition, employment, and supply chains. *European Research on Management and Business Economics*, 30(1), 100242. <https://doi.org/10.1016/j.iedeen.2024.100242>
- Rogovsky, N., Ozoux, P., Esser, D., Marpe, T., & Broughton, A. (2005). *Restructuring Corporate Success: A Socially Sensitive Approach*. International Labor Office.
- Safitri, C., & Miranda, M. (2024). Impact of technological adoption, innovation management, and market demand on competitive advantage. *International Journal of Business, Law*,
- Shin, J. (2017). *Corporate restructuring and its macro effects* (IMF Working Paper WP/17/17). International Monetary Fund.
- Singh, N. (2024, May 12). *Unveiling the competitive edge: The significance of R&D in today's business landscape*. CSA Engineering. <https://www.csaengineering.com.au/the-importance-of-research-development-in-maintaining-a-competitive-advantage/>
- Soppert, M., Oliveira, B. B., Angeles, R., & Steinhardt, C. (2024). The benefit of combining car rental and car sharing. *Journal of Business Economics*, 94(9), 1261-1298. <https://doi.org/10.1007/s11573-024-01204-9>
- Tolossa, A. T., Singh, M., & Gautam, R. K. (2024). Unveiling the nexus: The crucial role of competitive advantage in bridging entrepreneurial marketing practices and sustainable firm performance in small and medium enterprises. *Journal of Innovation and Entrepreneurship*, 13(43), 1-24. <https://doi.org/10.1186/s13731-024-00398-0>
- Wen-Cheng, W., Chien-Hung, L., & Ying-Chien, C. (2011). Types of competitive advantage and analysis. *International Journal of Business and Management*, 6(5), 100-104. <https://doi.org/10.5539/ijbm.v6n5p100>
- Wichmann, J. R. K., Edeling, A., Himme, A., & Sklenarz, F. A. (2024, August 26). Does market share still matter? *Harvard Business Review*. <https://hbr.org/2024/08/does-market-share-still-matter>
- Zafra, A. T., & Holder, S. (2024, April 3). Hertz's big bet on electric vehicle rentals did not work. *Bloomberg*. <https://www.bloomberg.com/news/articles/2024-04-03/hertz-s-big-bet-on-electric-vehicle-rentals-didn-t-work-luke-lzfm>
- Zhenjing, G., Chupradit, S., Ku, K. Y., Nassani, A. A., & Haffar, M. (2022). Impact of employees' workplace environment on employees' performance: A multi-mediation model. *Frontiers in Public Health*, 10, Article 890400. <https://doi.org/10.3389/fpubh.2022.890400>