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Strategic asset management and financial sustainability of micro-fleets in consumer transportation services

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Abstract

This article examines a model of strategic asset management within small-scale entrepreneurship in the vehicle rental sector. The micro-fleet is treated as a system of investment units requiring analytical control over unit economics, asset lifecycle, utilization rates, and return on investment (ROI). An applied model is proposed for assessing business sustainability based on break-even analysis, profit sensitivity to utilization, and revenue dynamics throughout the asset lifecycle. The results demonstrate that the long-term sustainability of micro-fleet projects is determined by disciplined financial modeling and strategic adaptability.

Keywords: Entrepreneurship; Asset Management; Micro-Fleet; Vehicle Rental; ROI; Unit Economics; Break-Even Point; Strategic Sustainability

1. Introduction

Consumer transportation services are undergoing structural transformation driven by the development of the platform economy and changing consumption patterns. According to international industry research (McKinsey, 2022; Statista, 2023), the short-term mobility market shows stable growth, creating new opportunities for small-scale entrepreneurship.

In conditions of limited financial resources, the sustainability of a small business depends on the accuracy of economic calculations and the ability to manage assets at the level of individual investment units. A micro-fleet, consisting of a limited number of vehicles, requires more detailed financial control compared to large corporate structures.

The purpose of this study is to analyze a model of strategic micro-fleet management in terms of financial sustainability and investment efficiency.

2. Theoretical Basis and Concept of Asset-Based Entrepreneurship

The model under consideration is based on the concept of asset-based entrepreneurship, which assumes that each asset is analyzed as an independent source of income.

The economic model is based on the following formula:

Profit = Revenue – (Fixed Costs + Variable Costs + Depreciation)

Key performance indicators include:

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Utilization rate
Return on investment (ROI)
Total cost of ownership (TCO)
Residual value of the asset

This approach aligns with contemporary entrepreneurial finance theories (Hisrich, Peters & Shepherd, 2020).

3. Asset Lifecycle Analysis and ROI Dynamics

The financial performance of a vehicle changes over its operational lifespan. In the early stages, revenue is maximized due to low maintenance costs. As the vehicle ages, repair costs increase and depreciation accelerates.

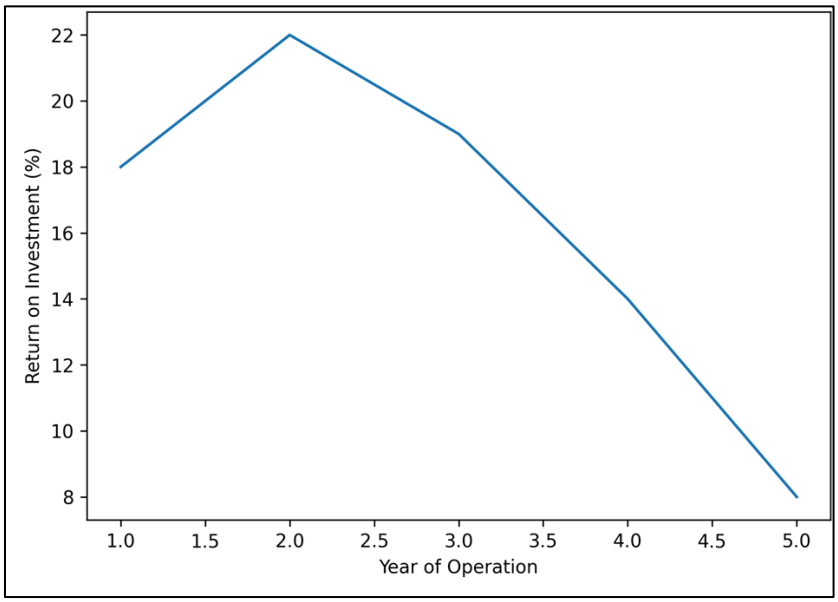

Figure 1 ROI Trend over Vehicle Lifecycle

The chart shows that ROI reaches peak values in the early stages and gradually declines. This confirms the rationale for strategically selling the asset before it enters the phase of accelerated revenue decline.

4. Profit Sensitivity to Utilization Rate

The utilization rate is a key factor in the sustainability of a micro-fleet. Even a slight decrease in utilization can push the business into a negative-margin zone.

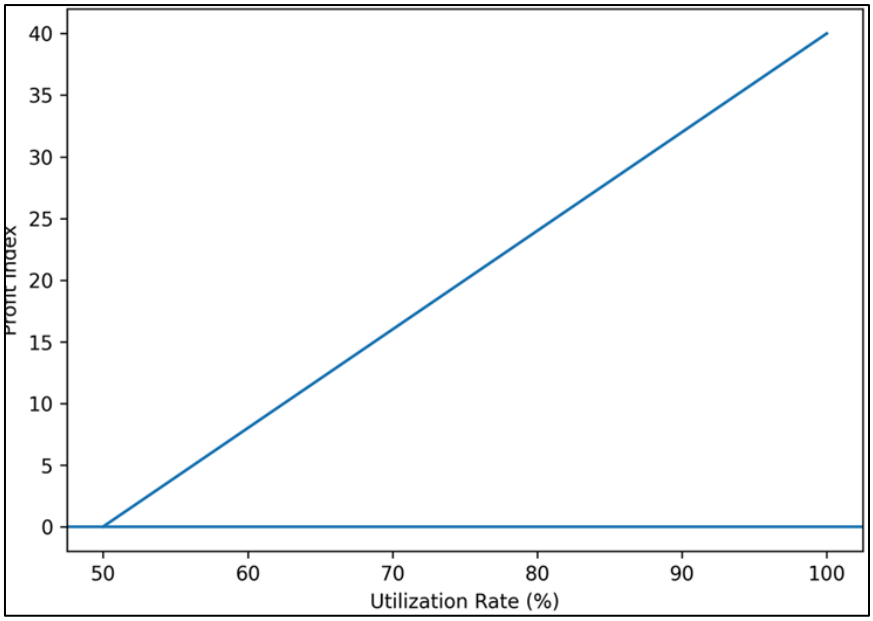

Figure 2 Profit Sensitivity to Fleet Utilization Rate

The analysis shows the existence of a critical utilization threshold, below which operation becomes economically unviable. Consequently, marketing tools and demand management become elements of financial strategy rather than purely operational functions.

5. Scaling and Systemic Risks

Expanding the fleet increases total revenue but simultaneously intensifies:

- Coordination complexity
- The need for working capital
- Synchronization of maintenance schedules
- The risk of cash flow gaps

Gradual scaling reduces the likelihood of systemic errors and allows strategy adjustments based on empirical data.

6. Strategic Restructuring and Exit

Financial sustainability does not imply infinite growth. When margins decline or market conditions change, a strategic exit from the project becomes rational.

Selling assets before accelerated depreciation allows the entrepreneur to:

- Lock in capital
- Minimize long-term costs
- Reallocate resources to more promising areas

Within the entrepreneurial lifecycle, such decisions reflect strategic maturity and managerial rationality.

7. Discussion of Results

The analysis confirms that the sustainability of a micro-fleet business is determined by:

- Controlling the asset lifecycle
- Analyzing roi dynamically
- Managing the utilization rate

- Gradual scaling
- Readiness for restructuring

Unlike large corporations, micro-fleet structures require higher calculation accuracy because they lack the diversification effect available at the level of hundreds of assets.

8. Conclusion

Strategic asset management in consumer transportation services requires the integration of financial analysis, capital discipline, and adaptive strategy. A micro-fleet can be sustainable if there is strict control over unit economics, continuous ROI monitoring, and timely decisions regarding asset sales.

The model presented demonstrates the applicability of investment analysis tools to small-scale entrepreneurship and emphasizes the importance of strategic thinking under conditions of market uncertainty.

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