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(RESEARCH ARTICLE)

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Entrepreneurial model for managing a Microfleet in the vehicle rental sector

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Innovator in the car rental and transport services business. Russia.

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Abstract

This article examines an entrepreneurial model for managing a microfleet of vehicles in the consumer services segment. It analyzes key unit economics parameters, total cost of ownership (TCO), the impact of utilization rate on financial performance, and approaches to business scaling. A structured model for assessing the economic sustainability of small businesses in the vehicle rental sector is proposed. The results confirm the importance of applying financial analysis and managerial planning tools to ensure the long-term sustainability of entrepreneurial projects.

Keywords: Entrepreneurship; Car Rental; Microfleet; Unit Economics; Asset Management; Economic Sustainability; Financial Modeling.

1. Introduction

1.1. Relevance of the Study

The vehicle rental sector demonstrates steady growth driven by digitalization and the development of platform-based services [4]. Changes in employment structures and increasing demand for flexible vehicle usage are shaping new conditions for small business operations.

In this environment, entrepreneurs face the need to develop sustainable financial models that allow efficient management of limited resources and risk minimization. Therefore, studying a microfleet management model is of both practical and theoretical interest.

1.2. Research Aim and Objectives

The aim of the study is to identify the factors that determine the sustainability of an entrepreneurial microfleet model in the vehicle rental sector.

To achieve this aim, the following objectives are set:

- To analyze the unit economics structure of a single asset;
- To assess the impact of utilization rate on financial performance;
- To examine the influence of the asset lifecycle on business efficiency;
- To determine approaches to scaling and risk management.

2. Methodology

The methodological basis of the study includes financial and investment analysis methods:

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- Calculation of total cost of ownership (tco);
- Unit economics analysis;
- Break-even analysis;
- Cash flow analysis.

A vehicle is considered as an investment unit generating a predictable cash flow [5]. Efficiency is assessed using utilization rate, margin, and payback period indicators.

Below are two graphs that best fit this article (they logically illustrate the key findings: utilization and asset economics).

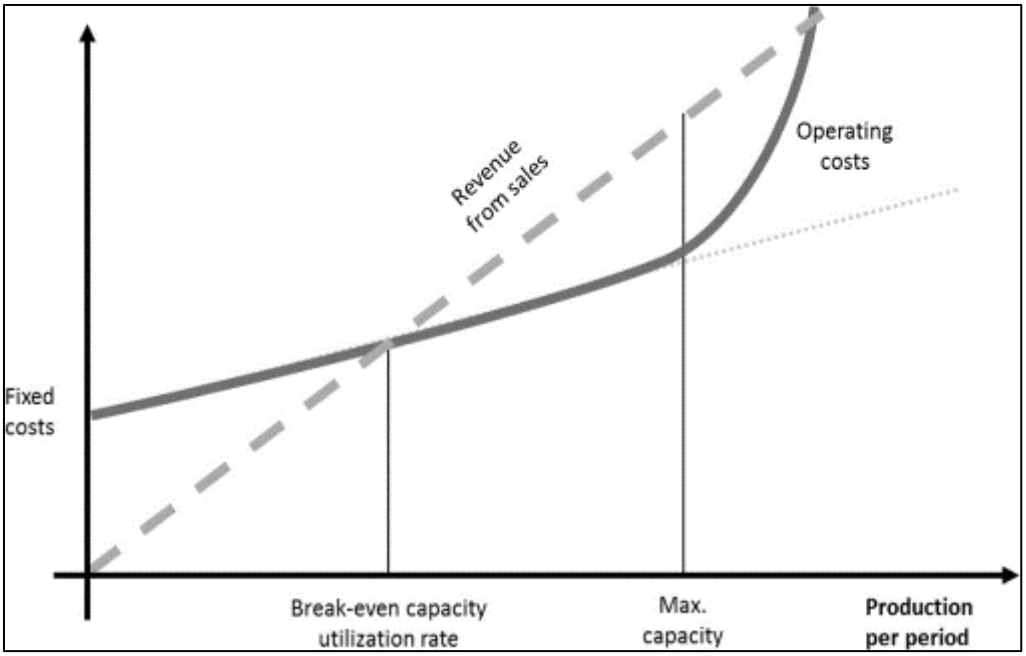

Figure 1 Break-Even Analysis of Vehicle Utilization, Revenue and Operating Costs

3. Research Results

3.1. Unit Economics as the Core Element of the Model

Unit economics is the primary tool for analyzing the efficiency of a single asset [1]. Within the framework of the model, the following components are considered:

- Rental revenue;
- Variable costs (maintenance, repairs);
- Fixed costs (insurance, administrative expenses);
- Depreciation.

It has been established that accurate accounting of the Total Cost of Ownership is a necessary condition for an objective assessment of profitability. Ignoring depreciation leads to distorted financial results [5].

3.2. Impact of Utilization Rate

The utilization rate has a direct impact on the financial sustainability of the business. With a high share of fixed costs, a decrease in utilization leads to reduced margins.

Thus, demand management and marketing activity function not only as operational tools but also as financial instruments.

3.3. Asset Lifecycle

The analysis showed that the efficiency of vehicle operation changes depending on the stage of its lifecycle.

In the early stages, operating costs are minimal; however, as wear and tear increase, maintenance costs rise and residual value declines.

Optimizing the timing of asset disposal allows for improved overall business profitability.

3.4. Business Scaling

Gradual expansion of the microfleet makes it possible to:

- Reduce managerial risks;
- Adjust financial parameters;
- Adapt the business model.

Rapid scaling without a validated economic model increases the likelihood of financial imbalances [2].

3.5. Strategic Exit

Within the entrepreneurial cycle, project completion can be considered a managerial decision aimed at capital optimization.

The sale of assets allows the financial result to be realized and resources to be reallocated.

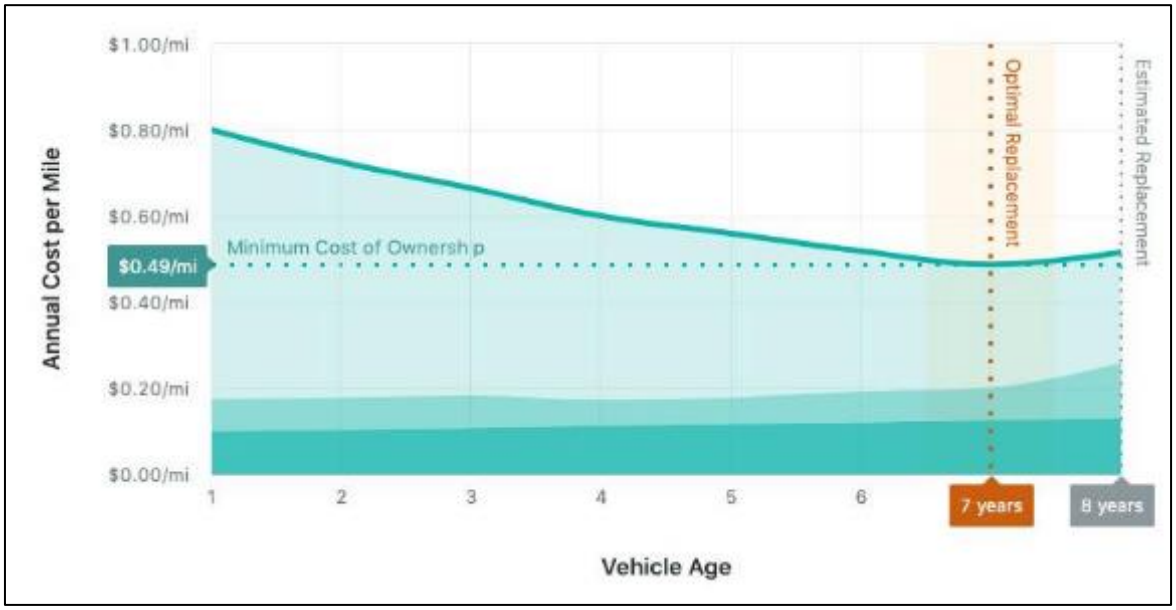

Figure 2 Vehicle Lifecycle Cost Curve and Optimal Replacement Horizon

4. Discussion

The results of the study show that the sustainability of the microfleet model is determined by the quality of managerial decisions rather than the scale of assets.

The key factors include:

- Systematic financial modeling;
- Accounting for the total cost of ownership;
- Control of utilization rate;
- Managed scaling;
- Adaptation to changes in the external environment.

Applying an investment approach to managing individual assets enhances overall business efficiency.

5. Conclusions

The analysis demonstrates that the sustainability of an entrepreneurial microfleet model is determined by a combination of financial and managerial factors.

Accurate calculation of unit economics, taking into account the Total Cost of Ownership, is a necessary condition for an objective assessment of business performance.

The utilization rate serves as a key driver of profitability, as changes in its level significantly affect financial results in the presence of a high share of fixed costs.

Considering the asset lifecycle makes it possible to optimize the timing of asset disposal and improve capital efficiency.

Gradual scaling reduces financial and operational risks, ensuring sustainable business development.

Thus, the application of financial analysis tools and strategic management practices contributes to increasing the sustainability of entrepreneurial projects in the vehicle rental sector.

Compliance with ethical standards

Disclosure of conflict of interest

The author declares that there is no conflict of interest.

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