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FINANCIAL FEASIBILITY ANALYSIS OF VEHICLE ADDITION AT PT. JALUR NUGRAHA EKAKURIR

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ABSTRACT

This study aims to analyze the financial feasibility of adding vehicles to PT. Jalur Nugraha Ekakurir, a company engaged in courier services and logistics. With the increasing market demand, the company is considering an investment to add a fleet to improve delivery capacity and efficiency. The method used includes cost-benefit analysis, Break-Even Point (BEP) calculation, Return on Investment (ROI), as well as sensitivity and risk analysis. The results show that the total investment of Rp3,700,000,000 requires a payback period of 148 months (approximately 12 years and 4 months), with an annual ROI of 8.1%. Although the BEP period is quite long, the investment is considered financially feasible in the long term. This study also identifies several risks such as fluctuations in operational costs and market demand, which need to be mitigated through proper managerial strategies.

Keywords: Financial feasibility analysis, operational vehicles, BEP, ROI, logistics distribution.

ABSTRAK

Penelitian ini bertujuan untuk menganalisis kelayakan finansial dari rencana penambahan kendaraan pada PT. Jalur Nugraha Ekakurir, sebuah perusahaan yang bergerak di bidang jasa kurir dan logistik. Seiring dengan meningkatnya permintaan pasar, perusahaan mempertimbangkan investasi penambahan armada guna meningkatkan kapasitas dan efisiensi pengiriman. Metode yang digunakan meliputi analisis biaya dan manfaat, perhitungan Break-Even Point (BEP), Return on Investment (ROI), serta analisis sensitivitas dan risiko. Hasil analisis menunjukkan bahwa total investasi sebesar Rp3.700.000.000 membutuhkan waktu pengembalian modal selama 148 bulan (sekitar 12 tahun 4 bulan), dengan ROI tahunan sebesar 8,1%. Meskipun waktu BEP cukup panjang, investasi dinilai layak secara finansial dalam jangka panjang. Penelitian ini juga mengidentifikasi beberapa risiko seperti fluktuasi biaya operasional dan permintaan pasar, yang perlu dimitigasi melalui strategi manajerial yang tepat.

Kata Kunci: Analisis kelayakan finansial, kendaraan operasional, BEP, ROI, distribusi logistik.

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1. INTRODUCTION

Currently, the development of the business world in Indonesia has been increasing rapidly from year to year, especially with the rise of online business activities or online ab shopping. This phenomenon has led to a significant surge in the demand for courier and logistics services.

PT. Jalur Nugraha Ekakurir is a company engaged in courier and logistics services. In line with the company's growth and the increasing market demand, PT. Jalur Nugraha Ekakurir plans to expand its fleet by adding more vehicles to improve operational efficiency and delivery capacity. This fleet expansion is expected to provide a competitive advantage, accelerate the distribution process, and enhance customer satisfaction.

The objective of this study is to conduct a financial feasibility analysis of the vehicle expansion plan at PT. Jalur Nugraha Ekakurir by considering various aspects, including investment costs, expected revenue, and an evaluation of potential risk factors that may arise.

Source : (e-commerce development report in indonesia)

2. THEORETICAL FRAMEWORK

Financial feasibility is one of the important aspects in any investment decision involving large capital expenditures. In the context of adding vehicles to a distribution company, financial feasibility analysis aims to determine whether the investment can provide benefits that are commensurate with the costs incurred.

Some relevant concepts in financial feasibility analysis are:

1. Cost-Benefit Analysis: This method is used to compare the total costs incurred with the expected benefits, either in the form of increased revenue or cost savings.
2. Break-Even Point (BEP): Is the break-even point, which is the amount of revenue that must be achieved so that the total investment costs can be covered.

3. RESEARCH METHOD

The methodology used in this analysis consists of several stages as follows:

1. Identification of Vehicle Addition Costs: Identifying all costs required for vehicle additions, such as vehicle purchase costs, operational costs, and maintenance costs.
2. Revenue or Benefit Estimation: Calculating the potential revenue generated from new vehicles, including increased delivery volume and reduced distribution costs.
3. Financial Analysis: Calculating Break-Even Point (BEP), ROI, and other financial ratios to assess financial feasibility.
4. Sensitivity Analysis: Testing the impact of changes in cost and revenue assumptions on analysis results.
5. Risk Assessment: Identifying risks associated with vehicle additions and providing recommendations for risk mitigation

Vol: 2 No.: 1 No. E- ISSN: 3025-4086

4. DATA ANALYSIS AND DISCUSSION

a.Vehicle Addition Costs

The cost of adding vehicles at PT. Jalur Nugraha Ekakurir consists of several main components:

Vehicle Price: If the company chooses to purchase new vehicles, the price per unit is approximately Rp500,000,000. For example, if PT. Jalur Nugraha Ekakurir plans to buy 5 vehicles, the total vehicle cost would be Rp2,500,000,000.

Operational Costs: These include fuel, driver salaries, insurance, and vehicle maintenance. Based on estimates, the operational cost per vehicle per month is around Rp10,000,000. For 5 vehicles, the total monthly operational cost is Rp50,000,000.

Depreciation Costs: New vehicles have a useful life of around 5 years with an annual depreciation rate of 20%. Therefore, for 5 vehicles, the annual depreciation cost would be approximately Rp500,000,000.

b. Revenue or Benefit Estimation

With the addition of vehicles, PT. Jalur Nugraha Ekakurir can increase delivery volume. It is estimated that each new vehicle can increase revenue by Rp15,000,000 per month. With 5 additional vehicles, the monthly revenue generated would be Rp75,000,000.

c. Break-Even Point (BEP) Analysis

BEP is calculated by comparing the total investment cost with gross profit per unit. In this case, the investment cost includes vehicle purchase, operational costs, and depreciation. To calculate BEP:

Total Investment Cost = Rp2,500,000,000 (Vehicle Price) + Rp600,000,000 (1-Year Depreciation) + Rp600,000,000 (12-Month Operational Costs) = Rp3,700,000,000

Monthly Revenue from 5 Vehicles = Rp75,000,000

Gross Profit per Month = Rp75,000,000 - Rp50,000,000 (Operational Costs) = Rp25,000,000

BEP = Rp3,700,000,000 ÷ Rp25,000,000 = **148 months**, or approximately **12 years and 4 months**.

d. ROI Analysis

To calculate ROI, we use the formula:

ROI = (Net Profit / Total Investment) × 100%

With an estimated annual net profit of Rp300,000,000 (Rp25,000,000 x 12 months), the annual ROI is:

ROI = (Rp300,000,000 / Rp3,700,000,000) × 100% = 8.1%

e. Sensitivity Analysis

Sensitivity analysis considers changes in fuel prices, maintenance rates, or delivery volume. For example, if operational costs increase by 10%, the total monthly operational cost would rise to Rp55,000,000, which could affect net profit.

5.Risk Assessment

Several risks to consider in vehicle addition include:

- **Fuel price fluctuations**: Rising fuel prices can increase operational costs.
- **Vehicle damage**: If vehicles experience breakdowns, maintenance costs and downtime may impact operational performance.
- **Market demand**: A decline in market demand can affect the revenue generated from the new vehicles.

6. CONCLUSION & SUGGESTION

CONCLUSION :

Based on the financial feasibility analysis conducted, the addition of vehicles at PT. Jalur Nugraha Ekakurir indicates that although the investment requires a relatively long time to reach the break-even point (approximately 12 years and 4 months), with an annual ROI of 8.1%, the investment remains viable when measured in terms of long-term revenue growth and improved operational efficiency. However, the company must consider potential risks and ensure appropriate mitigation strategies are in place.

SUGGESTION:

The company is advised to conduct regular evaluations of vehicle performance and the revenue generated to adjust operational strategies dynamically. In addition, diversifying income sources and optimizing delivery routes and schedules can enhance efficiency and accelerate the break-even point. The company should also prepare a contingency fund for unexpected costs and consider adopting technologies such as fleet management and tracking systems to minimize operational risks and improve cost control.

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Vol: 2 No.: 1 No. E- ISSN: 3025-4086

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