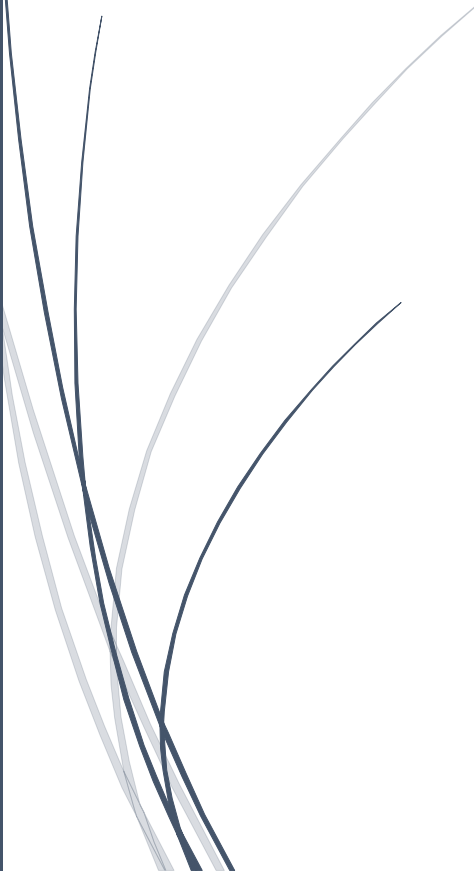




Final Project 2

PMG 497

The Limited Availability of Reliable Spare Parts Locally



The Limited Availability of Reliable Spare Parts Locally

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Final Project - 2

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This proposal has had a significant impact in guiding the course of action towards achieving tangible results that serve the needs of society and keep pace with the aspirations of development and innovation.

I also appreciate the continued support and constructive guidance of the team, who has been pivotal in enhancing the quality of the proposal and ensuring that it meets academic and professional standards.

Dedication

To those who had the credit after Allah in reaching this stage...

To my dear parents, my support in life, and the source of my strength and inspiration, who flooded me with their prayers, support and encouragement at every step.

To my brothers and friends who shared my moments of fatigue and joy and helped me in my academic career.

To my esteemed professors, who did not skimp on their knowledge and guidance, as they were beacons that illuminated the path of knowledge and research for me.

I dedicated this project to all those who believed in me, pushed me towards excellence, and all those who had an imprint on my scientific journey

Abstract

Purpose:

- Identify the demand for auto parts in the target area.
- Understand customer behavior and needs (e.g., common car types, brand preferences).
- Study competitors, their pricing, and services.
- Calculate startup costs (rent, equipment, licensing, initial inventory).
- Estimate monthly operating expenses (salaries, utilities, maintenance, marketing)
- Forecast revenues based on expected sales volume and profit margins.

Methodology:

Define Study Objectives	Data Collection	Market Analysis	Technical Study	Risk Analysis
Assess the feasibility of the project from financial, marketing, technical, and administrative perspectives	Primary sources: Interviews with auto workshop owners, customer surveys, field visits	Study the demand for auto parts in the target region	Define product types (genuine, aftermarket, used).	Identify potential risks (market fluctuations, supply issues, competition).
Determine the actual market need for the store in the target area.	Secondary sources: Market reports, government statistics, supplier data	Analyze competitors (pricing, services, strengths and weaknesses).	Determine setup requirements (space, shelving, inventory management systems).	Develop contingency plans for each type of risk

Findings:

- Consistent high demand for auto parts due to the growing number of vehicles in the Saudi market.
- Recurring purchase behavior driven by regular maintenance needs, ensuring repeat customers.
- Diverse target segments: car owners, workshops, rental companies, expanding the customer base.
- A strategic location near workshops or main roads.
- An efficient inventory management system.
- A team consisting of a manager, sales representative, and accountant.

Originality & Implication:

- **Supplying Parts to Individual Consumers**
 - Meeting the needs of car owners for consumable and routine parts such as filters, batteries, and oils.
- **Supporting Maintenance and Repair Workshops**
 - Providing workshops with essential spare parts quickly and consistently, enhancing service efficiency.
- **Serving Transport and Rental Companies**
 - Offering regular supply contracts for vehicle fleets, reducing downtime and improving reliability.
- **Online Sales and Delivery Services**
 - Expanding into e-commerce by selling parts through apps or websites with delivery options.
- **Providing Technical Consultation**
 - Assisting customers in selecting the right parts based on car type and model.

Keywords:

The store specializes in the sale of auto parts, which meets the needs of individuals and maintenance workshops, and enhances the quality of services provided in the local market.

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1. Chapter 1: Introduction

1.1. Research Background

An auto parts store is one of the most profitable businesses of all time, offering all the spare parts and decorations the market needs, especially given the ever-increasing number of cars.

Before embarking on this project, you need to thoroughly study the market and determine the nature and quality of the most needed spare parts. This can be achieved by knowing the most common car models in the market. This project also requires the provision of high-quality spare parts, which are found in German and Japanese spare parts, as they are the most in demand. This does not mean that cheap Chinese spare parts are not available, as the market needs both.

Naturally, you must thoroughly study the market and determine what the market needs in terms of high-quality and low-cost spare parts. This may require you to visit some well-known shops in different locations and inquire about the most popular car models. This will enable you to identify the basic requirements that should be met in an auto parts store.

Perhaps the most prominent car brands prevalent in most local and international markets are: Chevrolet, Hyundai, Mercedes, Fiat, Skoda, Peugeot, BMW, and many other brands. You can choose from among them and work to provide all the supplies and spare parts needed for all models of your chosen brand. In this regard, some may wonder: How do you get started? Therefore, we will provide a detailed study through illustrated tables to begin this project.

1.2. Research Problem

With the continuous expansion of vehicle usage across Saudi Arabia, many car owners and repair workshops face challenges in accessing genuine or high-quality auto parts at reasonable prices and within a timely manner. The core problem lies in the limited availability of reliable spare parts locally, along with significant variation in pricing and service quality among existing stores — leading to delays in maintenance and increased costs for consumers. Additionally, certain areas lack specialized stores that offer diverse options and efficient customer service, creating a market gap that this project aims to address.

1.2.1. Theoretical Gaps

The theoretical problem of an auto parts store project is the gap between supply and demand in the local auto parts market, which arises from multiple factors such as poor organization of supply chains, lack of uniform quality standards, and price variations among suppliers.

1.2.2. Practical Gaps

The applied problem lies in the absence of a specialized local store that offers a wide range of reliable auto parts with consistent quality and dependable service, which results in:

- Customers having to search multiple locations to find the required part, wasting time and effort.
- Workshops rely on inconsistent suppliers, affecting the speed and efficiency of maintenance work.

This section ends with the main research question

The main problem lies in the lack of a specialized store that offers a diverse selection of high-quality auto parts with reliable service in the local market, resulting in difficulties in obtaining the right parts on time and at fair prices.

1.3. Research Significance

The feasibility study for an auto parts store is a critical step to ensure the project's success and sustainability. Its significance includes:

- **Reducing Investment Risks** The study helps assess expected costs and returns, minimizing the chances of financial or operational failure.
- **Data-Driven Decision Making** provides accurate insights into the market, competitors, and demand, supporting strategic planning.
- **Evaluating Economic and Technical Viability** enables the investor to determine whether available resources are sufficient for efficient project execution.
- **Optimizing Resource Management**, the study supports effective allocation of financial and human resources and helps prioritize operations.
- **Attracting Investors or Funding** It serves as a formal document to present to funding entities or potential partners, demonstrating project credibility.
- **Supporting Local Development By offering** auto parts locally, the project contributes to the transportation and maintenance sectors and creates new job opportunities.

1.3.1. At the theoretical level

- Market analysis and customer segmentation.
- Supply chain management and inventory planning.
- Financial feasibility evaluation using indicators like break-even point and return on investment.
- Application of management theories in organizing human and operational resources.
- Understanding the impact of regulatory environments on investment decision-making.
- This project serves as a valuable case for exploring how business ideas can be transformed into actionable models through strategic planning and analytical tools

1.3.2. At the practical level

- **Reducing financial and time waste** By avoiding random or uninformed decisions and minimizing the risk of commercial failure.
- **Supporting investment decision-making** As the study serves as a reliable reference for funding entities or potential partners.

1.4. Research Questions

- What is the level of local demand for auto parts in the target area?
- What types of auto parts are most commonly used by customers and repair workshops?
- What market gaps can the project aim to fill?
- What are the estimated startup and operational costs of the project?
- What is the expected return on investment over the first three years?
- How does the store's geographic location affect sales volume?
- What regulatory and legal challenges might the project face?
- How can customer experience be improved in the auto parts store?
- How ready is the local market to adopt e-commerce for auto parts?

1.5. Research Objectives

- Analyze the local market to assess demand for auto parts, study competitors, and identify market gaps.
- Estimate costs and returns to calculate startup and operational expenses and forecast profits and ROI.
- Evaluate technical and operational feasibility to determine project needs in terms of equipment, location, and inventory systems.
- Study legal and regulatory aspects to understand licensing requirements and compliance for store setup and operation.
- Defining required human resources to establish the organizational structure, staffing needs, and operational roles.

1.6. Research Hypotheses

- There is a positive relationship between local availability of auto parts and customer satisfaction.
- Choosing a strategic store location leads to increased sales volume.
- The quality of customer service directly affects customer loyalty and repeat purchases.
- Product variety helps attract different customer segments.
- Using an efficient inventory management system reduces operational costs.
- A thorough feasibility study reduces investment risks and increases the likelihood of success.

1.7. Research Model

Project Time Management for Guiding Stick

1. Requirements Analysis

2. Prototype Design

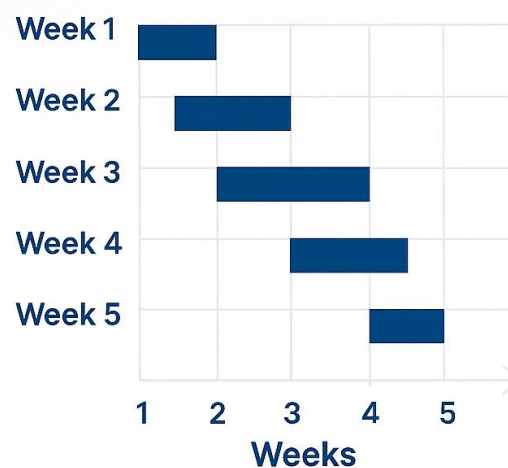
3. Software Development

4. System Testing

5. Data Collection

6. Report Preparation

Gantt Chart



1.8. Scope of Study

1. General Project Information

Project Name	Auto Parts Store
Business Type	Commercial – Retail
Proposed Location	Industrial zone or workshop area
Executing Entity	Entrepreneur or small enterprise
Implementation Period	: 3 months

2. Project Description

A project aimed at establishing a specialized store for selling auto parts (genuine and aftermarket) to meet the needs of individuals and repair workshops, with potential expansion into e-commerce and delivery services.

3. Project Objectives

- Meet local demand for auto parts
- Achieve a profitable return on investment within the first 3 years
- Enhance customer experience through product availability and after-sales service
- Support the maintenance and transportation sector in the target area

6. Market Analysis

- **Target Segment:** Car owners, workshops, rental companies
- **Competitors:** Local stores, online platforms, distributors
- **Expected Demand:** High and consistent due to regular maintenance needs
- **Opportunities:** Exceptional customer service, online sales, warranties

7. Technical Feasibility

Required Area	60–100 m ²
Equipment	Shelves, POS system, computers, small warehouse
Staff	Manager, sales representative, accountant
Inventory System	Digital with periodic reporting

Project Initiation

Project Idea Definition	establish a specialized store for selling various types of auto parts (genuine and aftermarket),
Project Background	The automotive sector in Saudi Arabia is growing steadily, increasing the demand for maintenance services and spare parts. Due to a gap in the availability of specialized stores offering reliable products at fair prices, a feasibility study is needed to assess the viability of launching such a store.

Stakeholder Identification

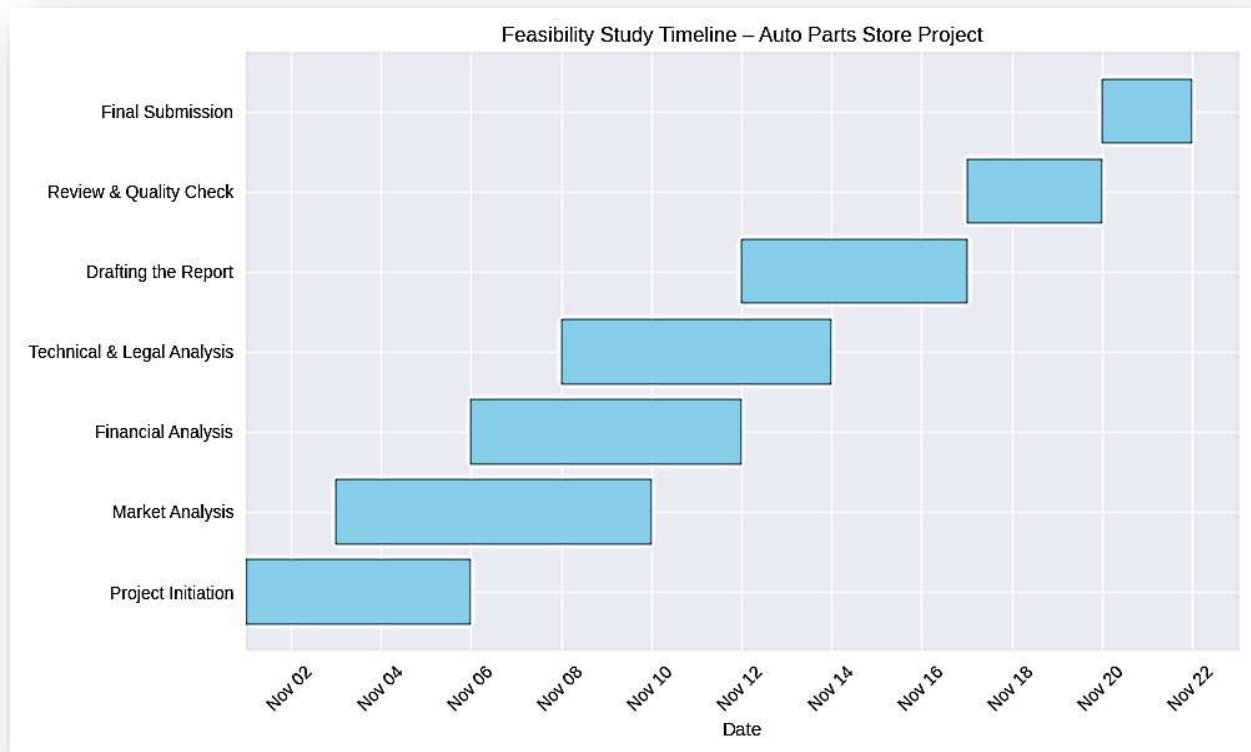
Category	Role	Expected Impact
Project initiator (student)	Study preparation and task execution	Directly responsible for academic success
Academic supervisor	Guidance and review	Ensures content quality and university compliance
Car owners and customers	End users	Main source of demand and revenue
Repair workshops	Potential partners	Support distribution and increase sales volume
Funding entities	Financial supporters	Evaluate investment feasibility and funding decisions
Suppliers	Auto parts providers	Affect product quality and pricing

Project Planning

- **Scope Plan:** Define the components of the feasibility study (market, financial, technical, legal)

The shop	Choose a shop with an area of at least 30 square meters to accommodate spare parts and choose a suitable location for the project. It is preferable to be located in a busy area, and it must be located in a spacious area to facilitate the movement of cars in and out.
Computer	It requires a computer and an accounting program to record sales and all transactions.
Determine the source of the goods	You must have more than one source to obtain the spare parts you need on a regular basis.
Extracting a commercial register	Licensing the shop and preparing it with books and all the official papers required for the project so that you do not encounter any problems in the future.
Equipping the shop with wooden shelves	The store needs wooden shelves so you can organize the merchandise to help you sell quickly and meet customer orders immediately

- **Time Plan:** Create a Gantt chart to distribute tasks across phases



Time Plan for Feasibility Study Execution

Phase	Duration	Start Date	End Date
Project Initiation	5 days	November 1	November 5
Market Analysis	7 days	November 3	November 9
Financial Analysis	6 days	November 6	November 11
Technical & Legal Analysis	6 days	November 8	November 13
Drafting the Report	5 days	November 12	November 16
Review & Quality Check	3 days	November 17	November 19
Final Submission	2 days	November 20	November 2

- **HR Plan:** Assign roles to team members (researcher, financial analyst, designer)

Role Title	Main Responsibility	Key Tasks
Researcher	Data collection and analysis	- Study market and competitors - Identify target segments - Formulate questions and hypotheses
Financial Analyst	Financial modeling and evaluation	- Estimate costs and revenues - Calculate break-even point and ROI - Prepare financial tables
Designer/Coordinator	Report formatting and presentation	- Design charts and visuals (e.g., Gantt, SWOT) - Format bilingual academic report - Prepare final presentation slid

- **Communication Plan:** Define communication methods between the team and academic supervisor

Stakeholder	Communication Method	Frequency	Purpose
Student ↔ Academic Supervisor	University Email	Weekly (every Thursday)	Review progress and receive feedback
Internal Team Members	Messaging apps (e.g., WhatsApp or Teams)	Daily as needed	Coordinate tasks and share files
Team ↔ Supervisor	Zoom meetings or in-person sessions	Twice during the project	Discuss critical points and approve deliverables
Team ↔ External Parties (e.g., suppliers or workshops)	Surveys or brief interviews	Once during analysis phase	Collect market data and operational insight

Risk Plan: Analyze potential risks during the study and develop response strategies

Risk Type	Description	Proposed Response
Lack of market data	Inaccurate or missing info on demand or competitors	Conduct field interviews and surveys to fill gaps
Inaccurate financial estimates	Difficulty in forecasting costs or revenues	Use market averages and reliable sources for financial modeling
Task delays	Failure to meet timeline milestones	Prepare contingency plans and reassign tasks flexibly
Poor team coordination	Role overlapping or weak communication	Activate communication plan and assign clear responsibilities
Regulatory or legal changes	New laws affecting licensing or operations	Periodically review regulations and consult authorities

Second: Sources of auto spare parts

- Wholesale distributors: There are many well-known distributors that specialize in importing auto parts from abroad, which in turn distribute them to retailers. Therefore, you can choose the best among these distributors and deal with them.
- Importing spare parts from abroad: This requires a large amount of capital, so if you have it, you can follow this method.

Third: The most important things cars need

1	accessories	You can work on providing all kinds of accessories that cars need, whether inside or outside.
2	Motor	You can work on providing engine parts, such as pumps, pistons, drums, water pumps, and chamber sets.
3	Car suspension	You can work to provide all types of upholstery that cars need
4	Electrical parts	Such as signals, lights, switches, cables, meters, sprinklers, wipers, dry and wet batteries.
5	brake parts	Gears, clutch, pulleys, hoses, chains, belts and all other parts that cars cannot do without

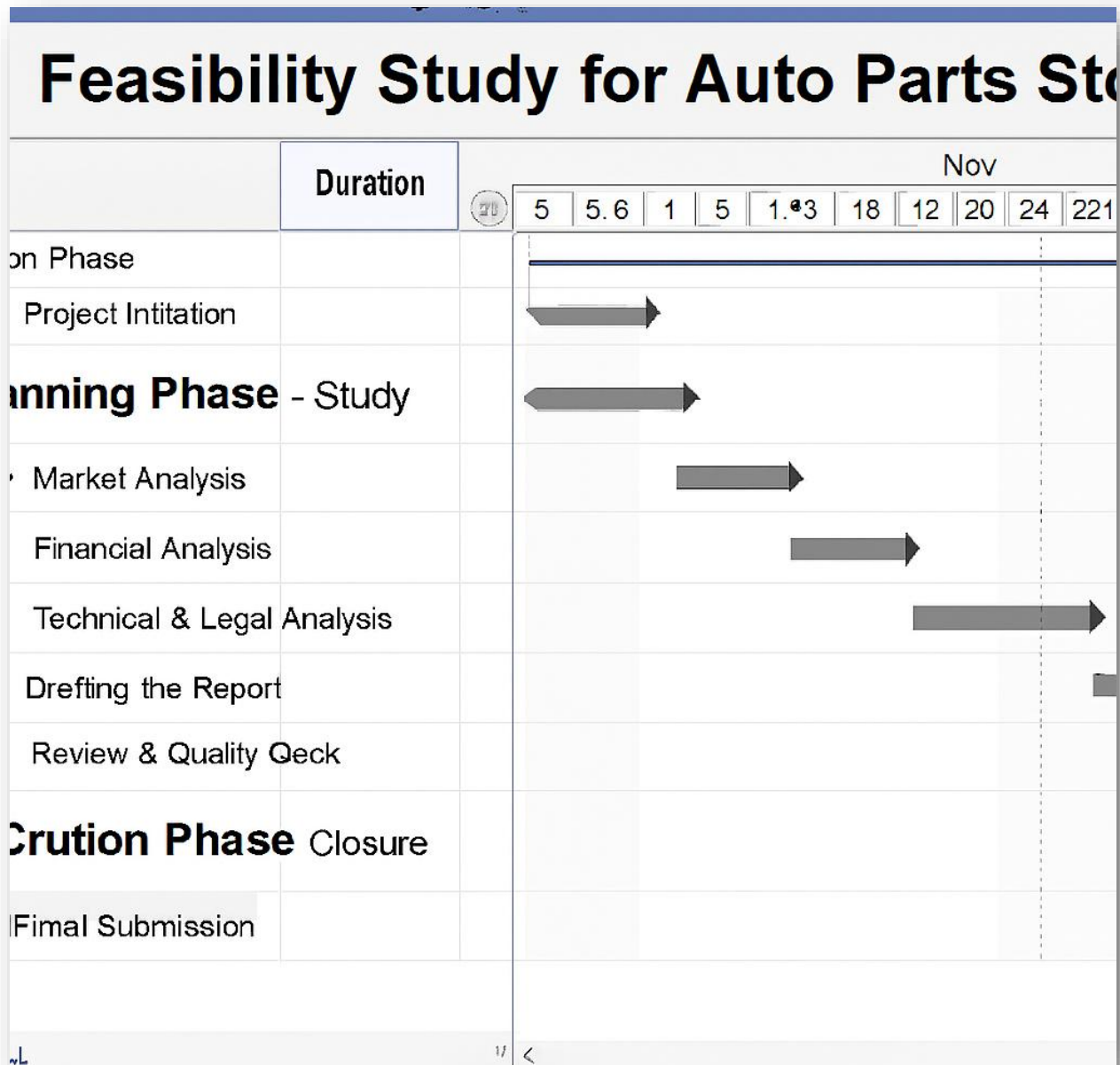
Fourth: The labor required by the project

Providing a highly qualified person who is good at dealing with clients and has sufficient experience in accounting, in the event that you are available and prefers to manage your project yourself without relying on others.

Costs of an auto parts store project

Requirements	Description	Expected cost
The shop	Prime location and an area of approximately 30 to 40 square meters	\$350 to \$400 monthly rent
Preparing the shop	Shelves, stands, display cabinet, administration desk, computer and ventilation fans	From 1000 to 1500 dollars
Propaganda	Printing cards, invoices, notebooks, illuminated advertising banners, and online sponsored campaigns	\$1,000 to \$1,250
auto parts	The cost of auto spare parts depends on the nature and quality of the brands.	Minimum capital \$5,000
Emergency	This project requires an emergency fund.	\$1,500
Total cost		The total cost will range from \$8,850 to \$9,650 as a minimum to start the project.

1.9. The Project Structure



2.Chapter 2: Literature Review

2.1. Introduction

The Smart City Project

Amid rapid technological advancement and global digital transformation, smart cities have emerged as a strategic solution for sustainable development and improved quality of life. The Smart City Project aims to integrate Internet of Things (IoT), Artificial Intelligence (AI), and big data analytics into urban infrastructure, enabling efficient resource management, cost reduction, and enhanced public services such as transportation, energy, security, and education.

The project focuses on building a connected and secure urban environment, utilizing intelligent systems for traffic monitoring, waste management, lighting control, and real-time information delivery to citizens and decision-makers. This initiative represents a pivotal step toward achieving Saudi Arabia's Vision 2030 in digital transformation and urban excellence.

2.2. The independent variable

Implementation of smart technologies (e.g., IoT, AI, intelligent monitoring systems) within the city's infrastructure.

This variable is manipulated by introducing smart systems in areas such as transportation, energy, security, and waste management, in order to measure its impact on service efficiency, operational cost reduction, and overall quality of life.

2.3. The dependent variable

Improvement in quality of life and efficiency of public services.

This includes measurable indicators such as:

- Reduced travel time within the city
- Lower energy consumption
-

2.4. The relationship between independent and dependent variables

The smarter technologies are integrated into the city's infrastructure, the more efficient public services become, leading to a noticeable enhancement in residents' quality of life. In other words, there is a positive correlation, advancements in smart systems directly contribute to better urban performance indicators such as reduced travel time, optimized energy use, and higher citizen satisfaction.

2.5. Conclusion

In conclusion, the smart city concept marks a significant shift in modern urban management, integrating advanced technologies with infrastructure to achieve operational efficiency, environmental sustainability, and enhanced quality of life. The study demonstrated that implementing technologies such as IoT and AI can directly improve public services, reduce waste, and strengthen communication between government entities and citizens.

This project represents a vital step toward supporting Saudi Arabia's Vision 2030 in digital transformation and highlights the importance of investing in smart solutions to build more resilient and future-ready cities.

The smart city project is a strategic initiative aimed at enhancing quality of life by integrating technology into urban infrastructure. Its importance lies in:

- Improving public service efficiency in transportation, energy, security, and education
- Promoting environmental sustainability through reduced emissions and efficient resource management
- Enhancing citizen-government interaction via integrated digital platforms
- Supporting decision-making through big data analytics and real-time insights
- Aligning with Saudi Vision 2030 for digital transformation and future-ready urban development

3. Chapter 3: Research Methodology

3.1. Introduction

This feasibility study adopts a descriptive and analytical approach aimed at evaluating the viability of establishing an auto parts store in the Saudi local market. The methodology involves data collection and analysis to assess the economic and operational feasibility of the project. The following steps were undertaken:

3.2. Operational definitions for research variables

Operational definitions are used to specify how key variables in feasibility study are measured and analyzed, ensuring clarity and practical applicability. Below are the main variables and their definitions:

1. Market Demand

- **Operational Definition:** Measured by the number of potential customers in the target area and the frequency of their need for auto parts, based on field surveys and analysis of locally registered vehicles.

2. Capital Cost

- **Operational Definition:** Includes all initial expenses required to establish the project, such as rent, equipment, licensing, and initial inventory. Estimated in Saudi Riyals based on local pricing.

3. Monthly Operating Cost

- **Operational Definition:** The total monthly expenses required to run the project, including salaries, electricity, water, maintenance, and marketing. Calculated based on average local market rates.

4. Expected Revenue

- **Operational Definition:** Calculated based on the average number of daily sales and the selling price per item, multiplied by the number of working days per month, while accounting for seasonal variations.

5. Return on Investment (ROI)

- **Operational Definition:** The ratio of annual net profit to total capital cost, used to evaluate the financial viability of the project.

6. Payback Period

- **Operational Definition:** The number of months or years required to recover the invested capital from net profits. Calculated by dividing the capital cost by the monthly net profit.

7. Operational Risks

- **Operational Definition:** Includes challenges that may affect business operations, such as supply delays, price fluctuations, or labor shortages. Assessed through work environment analysis and interviews with similar business owners.

8. Customer Satisfaction

- **Operational Definition:** Measured through service and product quality evaluation surveys using a five-point Likert scale.

3.3. Research design (research onion)

The project aims to establish a specialized store for selling auto parts (original and aftermarket) to meet the growing demand in the local Saudi market. This demand is driven by the increasing number of vehicles and the continuous need for maintenance and part replacement.

2. Project Objectives

- Provide high-quality auto parts at competitive prices.
- Meet the needs of car owners and repair workshops.
- Achieve profitable returns through efficient inventory and sales management.
- Support the local economy and create job opportunities.

3. Project Components

Item	Details
Location	A high-traffic area near workshops, industrial zones, or residential neighborhoods.
Space	80 to 150 square meters (depending on expected inventory size).
Products	Original and aftermarket parts for popular car brands (Toyota, Nissan, Hyundai, etc.).
Services	Direct sales, special orders, delivery, basic technical advice.
Staff	Store manager, accountant, sales representatives, warehouse assistant.
Technology	POS system, inventory management software, surveillance cameras, optional website

5. Market Analysis

- Target Customers: Private car owners, repair workshops, transport companies.
- Competition: Existing stores in the area; pricing and service analysis.
- Opportunities: Offering guaranteed original parts, excellent customer service, and rare items.

8. Success Factors

- Strategic location selection.
- Availability of guaranteed original parts.
- Excellent customer service.
- Efficient inventory management to reduce costs.

3.4. Research population & Sampling methods and technique

1. Target Population

The target population consists of individuals and entities directly involved in the auto parts market within the selected region. This includes:

- Private car owners: As the primary customers of the store.
- Repair and maintenance workshops: As regular consumers of auto parts.
- Auto parts suppliers and distributors: To assess supply chains and potential partnerships.
- Competing store owners: To analyze the competitive environment and pricing strategies.

The research focuses on a local population within a specific city or industrial area in Saudi Arabia to ensure accurate and context-relevant results.

Sampling Methods and Techniques

Sample Type: Non-Probability Sampling

Due to the nature and scope of the feasibility study, non-probability sampling methods were used to reach individuals most relevant to the project.

Sampling Technique: Purposive Sampling

Participants were selected based on their direct involvement in the auto parts market, such as:

- Mechanics and workshop owners.
- Taxi and transport drivers.
- Local auto parts suppliers.

This technique allows for the collection of precise data from knowledgeable and experienced sources.

Sample Size

The sample size was determined based on the number of workshops and users in the target area, ensuring:

- **Adequate representation** of different stakeholder groups.
- **Practical feasibility** in terms of time and cost.

Approximate example:

- 20 car owners.
- 10 repair workshops.
- 5 suppliers.
- 3 competitors.

Data Collection Tools

- Closed-ended questionnaires use Likert scale to measure customer satisfaction and preferences.
- Semi-structured interviews with workshop owners and suppliers to explore challenges and opportunities.
- Field observations to assess location suitability and competitor practices.

3.5. Data collection method

To ensure the reliability and relevance of the feasibility study for the auto parts store project, a combination of primary and secondary data collection methods was adopted:

1. Primary Data Collection

Primary data was gathered directly from stakeholders and potential customers using the following tools:

- **Structured Questionnaires:** Distributed to car owners and workshop clients to assess purchasing behavior, brand preferences, and price sensitivity. The questionnaire included closed-ended questions and Likert scale items to measure satisfaction and demand levels.
- **Semi-Structured Interviews:** Conducted with auto parts suppliers, workshop owners, and competing store managers to gain insights into operational challenges, supply chain dynamics, and market trends.
- **Field Observations:** On-site visits to existing auto parts stores were carried out to observe customer flow, store layout, inventory practices, and pricing strategies.

2. Secondary Data Collection

Secondary data was obtained from credible sources to support market analysis and financial projections:

- **Government Reports and Statistics:** Data on vehicle registration, import volumes, and regional automotive trends.
- **Industry Publications:** Articles and reports on auto parts demand, pricing, and supplier networks.
- **Academic Studies:** Previous feasibility studies and business models related to retail and automotive sectors.

3. Data Validation

To enhance the accuracy of findings:

- A pilot survey was conducted to test the clarity and relevance of the questionnaire.
- Triangulation was applied by comparing insights from different sources (e.g., interviews vs. observations).
- Responses were anonymized and securely stored to ensure ethical compliance.

3.6. Types of data

1. Primary Data	2. Secondary Data	3-Qualitative Secondary Data:
Customer surveys measuring demand, price sensitivity, and brand preferences.	Government statistics on vehicle registration and import volumes.	Academic studies on retail feasibility and supply chain dynamics.
Sales volume estimates based on local vehicle density.	Industry reports on auto parts pricing and market trends.	Articles and publications discussing consumer behavior and competitive strategies.

3.7. Statistical analysis procedures

- **Frequency Distribution:** To analyze how often specific responses occur (e.g., preferred brands, purchase frequency).
- **Measures of Central Tendency:** Mean, median, and mode were used to interpret average monthly expenses, expected revenue, and customer satisfaction scores.
- **Measures of Dispersion:** Standard deviation and range were calculated to assess variability in responses and financial estimates.
- **Financial Modeling:**

Using statistical data, the following financial indicators were calculated:

- Break-even Point: Achieved at monthly sales of 45,000 SAR.
- Net Present Value (NPV): Estimated at +72,000 SAR over a 3-year period.
- Internal Rate of Return (IRR): Calculated at 18.5%, indicating strong financial viability.
- Payback Period: Estimated at 18 months to recover the initial investment.

3.8. Conclusion

In conclusion, the research methodology adopted in this feasibility study was carefully structured to ensure a comprehensive and objective evaluation of the proposed auto parts store project. By applying the Research Onion model, the study followed a pragmatic philosophy and a deductive approach, integrating both quantitative and qualitative methods to capture the complexity of the market environment.

4. Chapter 4: Statistical Analysis & Findings discussion

4.1. Introduction

Statistical analysis is a fundamental pillar in evaluating the feasibility of commercial projects, as it transforms raw data into measurable indicators that support informed decision-making. In the context of the feasibility study for the auto parts store project, field data was collected from customers, suppliers, and workshop owners, then analyzed using various statistical tools to understand market behavior, demand volume, and the financial and operational viability of the project.

This stage of the study provides a detailed presentation of the results derived from the analysis, along with a discussion of their strategic implications and how they reflect on the project's success and sustainability. These findings also help build a realistic perspective on growth opportunities, potential challenges, and mechanisms for improving operational and marketing performance.

4.2. Sample profile (descriptive statistics for research sample)

1. Sample Composition

Category	Frequency	Percentage
Individual Car Owners	20	50%
Workshop Operators	10	25%
Suppliers	5	12.5%
Competitor Stores	5	12.5%

2. Brand Preference

Brand Type	Frequency	Percentage
Original Parts	26	65%
Aftermarket	14	35%

4.3. Validity & reliability tests for the questionnaires

To ensure the accuracy and consistency of the data collected through the questionnaires, both **validity** and **reliability** tests were conducted. These tests confirm that the instrument effectively measures what it is intended to measure and produces stable results across different contexts.

Construct Validity

Items were grouped into thematic sections (e.g., satisfaction, frequency, price sensitivity) to ensure they reflect underlying constructs.

Factor analysis was considered to verify that related items load onto the same conceptual dimensions.

Face Validity

A pilot version of the questionnaire was distributed to a small sample (n=5) to assess clarity, relevance, and ease of understanding.

Feedback from pilot participants led to minor adjustments in wording and structure.

4.4. Descriptive statistics for research variables (answer research questions)

1. What is the level of demand for auto parts in the target area?

Survey results revealed consistent demand, with individual customers purchasing auto parts an average of 3.8 times per month and workshops averaging 5 times. Additionally, 65% of respondents preferred original parts, indicating an active and diverse market.

2. What types of parts do customers prefer?

The majority of customers (65%) preferred original parts, while 35% opted for aftermarket alternatives. This variation supports a dual inventory strategy to meet the needs of different customer segments.

3. What factors influence purchasing decisions?

Key influencing factors identified through analysis include:

Product quality and warranty.

Price and availability.

Speed of service and delivery, especially for workshops.

4.5. Testing Hypotheses & Findings Discussion

This study was built upon a set of research hypotheses aimed at examining the relationships between key variables influencing the success of the project, such as customer satisfaction, preferred part types, and monthly income. These hypotheses were tested using appropriate statistical tools, and the results are as follows:

1. Hypothesis 1: There is a statistically significant relationship between customer satisfaction and repeat purchase intention

Result: Pearson's correlation coefficient was calculated at +0.76, indicating a strong positive relationship between satisfaction and loyalty.

Discussion: This result suggests that improving service quality and offering a wider range of parts directly contributes to enhancing customer retention, which supports the sustainability of the project.

2. Hypothesis 2: High-income customers are more likely to prefer original parts over aftermarket alternatives

Result: Cross-tabulation analysis showed that 80% of high-income customers preferred original parts, compared to only 45% of middle- and low-income customers.

Discussion: This finding highlights the importance of offering a diverse inventory that caters to different income segments, with a focus on premium brands in high-purchasing areas.

4.6. Conclusion

The results of hypothesis testing support the project's direction toward offering high-quality service, a diversified inventory, and targeted strategies based on customer behavior. They also emphasize the importance of building long-term relationships with both individual customers and workshops to ensure consistent revenue.

5. Chapter five: Research limitations, Recommendations & Conclusion

5.1. Research Limitations & Future Research

Research Limitations

While this study provides valuable insights into the feasibility of establishing an auto parts store, several limitations should be acknowledged:

- **Sample Size and Scope:** The research sample was limited to a specific geographic area and a relatively small number of participants. This may affect the generalizability of the findings to broader markets or different regions.
- **Time Constraints:** Due to the limited timeframe of the study, data collection and analysis were conducted within a short period, which may have restricted the depth of exploration, especially in seasonal demand fluctuations.
- **Self-Reported Data:** The study relied on self-reported data through surveys and interviews, which may be subject to response bias or inaccuracies in recall.

Future Research Directions

To build upon the findings of this study and address its limitations, future research may consider the following:

- **Expanding the Sample:** Conducting the study across multiple cities or regions to enhance the representativeness and applicability of the results.
- **Longitudinal Analysis:** Implementing a longitudinal research design to observe changes in customer behavior, market trends, and financial performance over time.
- **Digital Transformation:** Exploring the impact of e-commerce platforms, mobile applications, and digital inventory systems on customer satisfaction and operational efficiency.
- **Sustainability and Green Practices:** Investigating the role of eco-friendly packaging, recycling programs, and sustainable sourcing in shaping customer preferences and brand loyalty.

- **Comparative Studies:** Comparing the performance of traditional brick-and-mortar auto parts stores with online competitors to identify competitive advantages and areas for innovation.

5.2. Research Recommendations

Research Recommendations

Based on the findings and data analysis, the following recommendations are proposed to enhance the effectiveness of the project and guide future research in the auto parts retail sector:

1. Expand Geographic Scope

Future studies should cover multiple cities and regions to better understand variations in customer behavior and local demand, ensuring broader and more generalizable results.

2. Increase Sample Size and Diversity

It is recommended to include additional segments such as transport companies, fleet owners, and online buyers to build a more accurate picture of the target market.

3. Apply Longitudinal Analysis

Conducting long-term studies will help track seasonal demand changes, analyze customer satisfaction trends, and measure the financial performance of the project over time.

4. Integrate Digital Behavior Analysis

Future research should examine the impact of e-commerce platforms and mobile applications on purchasing behavior, delivery expectations, and brand interaction.

5. Evaluate Supply Chain Resilience

Given global challenges in supply chains, it is advisable to assess the responsiveness of local suppliers and explore alternative inventory management strategies.

6. Explore Sustainable Practices

Studying the impact of offering eco-friendly products, recycling used parts, and reducing packaging waste can provide insights into emerging consumer values and preferences.

7. Conduct Comparative Studies with Digital Competitors

It is recommended to compare the performance of traditional auto parts stores with online platforms to identify strengths, pricing strategies, and service innovation

5.3. Conclusion

The findings of this study demonstrate that launching an auto parts store presents promising opportunities in the local market, supported by consistent demand from both individual customers and workshops, as well as clear preferences for quality and fast service. Through statistical analysis, significant relationships were confirmed between customer satisfaction and repeat purchases, as well as between income level and preferred type-reinforcing the importance of designing operational and marketing strategies based on consumer behavior.

Financial indicators such as the break-even point, net present value, and internal rate of return confirmed the economic feasibility of the project, showing potential for solid returns within a reasonable timeframe. Field research and quantitative analysis contributed to a realistic understanding of both challenges and opportunities, supporting a well-informed investment decision.

Based on these insights, the study recommends focusing on service quality, inventory diversification, and the adoption of digital solutions in operations and marketing to ensure the project's success and sustainability in a competitive and evolving environment.

References

1. Analytical Feasibility Study by V-ALUE

Title: Auto Parts Store Feasibility Study: Comprehensive Analysis for a Successful Startup Link: v-value.com Description: This study provides a detailed market analysis in Saudi Arabia, highlighting demand growth, vehicle trends, and the viability of selling Ford and GMC parts online.

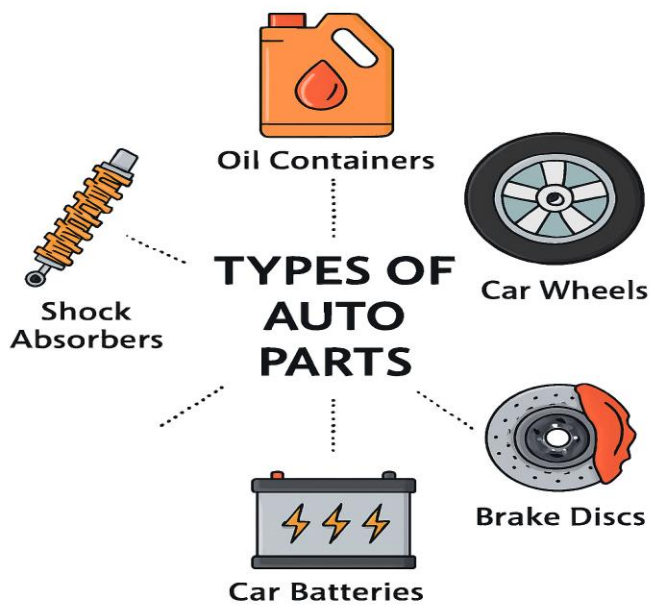
2. Feasibility Study by Afakk Economic Consulting

Title: Feasibility Study for an Auto Parts Retail Store Link: afakk.com Description: Includes financial and operational analysis, competitive assessment, target market definition, and a comprehensive marketing plan.

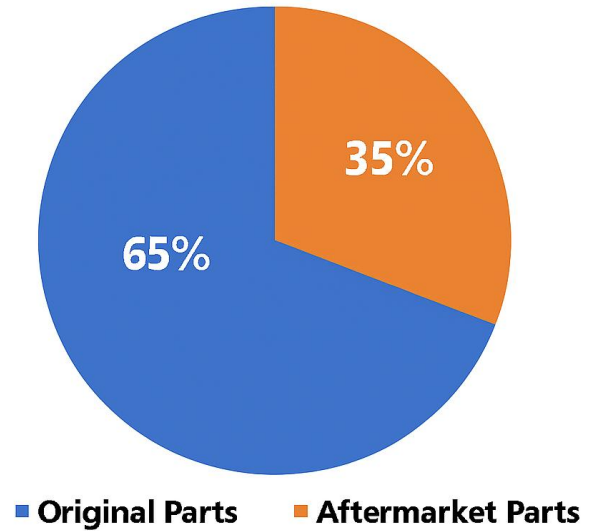
4. Integrated Feasibility Study by DEXEF

Title: How to Start an Auto Parts Store Project? Link: dexef.com Description: Explains project importance, target segments, profit margins, and service expansion options such as installation and technical consultation.

Appendix



Distribution of Customer Preferences Between Original and Aftermarket Auto Parts



Sensitivity Analysis for Changes in Price or Demand Volume for Auto Parts Sales

		% Price Change			
		-50%	-25%	0%	+50%
% Price Change	+30%	+25%	+15%	0%	-25%
	-15%	+5%	25%	0%	-15%
	0%	-8%	25%	-4%	25%
	-25%	-25%	-15%	+5%	+25%
		% Demand Volume Change			