

AMERICAN COLLEGE OF TECHNOLOGY

DEPARTMENT OF BUSINESS STUDIES

MASTER OF BUSINESS ADMINISTRATION PROGRAM



FEASIBILITY STUDY OF ESTABLISHING A LAST-MILE DELIVERY COMPANY

A Project Submitted to the Department of Business Studies of American
College of Technology

as a Partial Fulfillment of the requirement of the Award of Master of
Business Administration

By

Ahmed Yimam Hassen

Advisor

Dr. Yirgalem Gerba

July 2024

Addis Ababa, Ethiopia

Declaration

I, **Ahmed Yimam Hassen** hereby declare that a project work entitled **feasibility study of establishing a last-mile delivery company** submitted to The Department of Business studies of American College of Technology in partial fulfillment of the requirements for the award of the **Master Business Administration** is a record of original work done by me during 2024 academic year under the supervision and guidance of **Dr. Yirgalem Gerba** and it has not formed the basis for the award of any Degree/Diploma/Associate ship/Fellowship or other similar title of any candidate of any university.

Place: **Addis Ababa**

Date: **02/07/2022**



Signature of the Candidate

Certificate

This is to certify that the project work entitled **feasibility study of establishing a last-mile delivery company** submitted to the Department of Business Administration, MBA Program in partial fulfillment of the requirements for the award of the **Master of Business Administration** is a record of original project work done by **Ahmed Yimam Hassen** during the period 2024 academic year under my supervision and guidance and the thesis has not formed the basis for the award of any Degree/Diploma/Associate ship/Fellowship or other similar title of any candidate of any University and it complies with the regulation and accepted standards of the College.

Name of Advisor: Dr. Yirgalem Gerba

Signature: _____

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Approval Sheet

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Feasibility Study of Establishing a Last-mile Delivery Company

BY: Ahmed Yimam Hassen

Id Number: OMBA-508-22A

Approved by:

Advisor

Dr. Yirgalem Gerba

Name

Signature

Date

Internal Examiner

Name

Signature

Date

External Examiner

Name

Signature

Date

Acknowledgment

First and foremost, I want to give my thanks to Almighty God/Allah for giving me the chance to enjoy the fruits of my Endeavour.

Second, I thank my esteemed advisor **Dr. Yirgalem Gerba** for his /her incessant guidance, perspicacious thoughts, constructive criticism, and his /her great efforts to clarify things clearly and easily throughout my thesis writing period.

Third, my profound thanks go to the department head _____ for his/her support and facilities extended throughout this research work.

Fourth, I thank dean of the college _____ for the co-operation, support, and needs rendered throughout my study period.

Fifth, I wish to express my gratitude to my friends, relatives, colleagues, and students for all the support and help that need to be extended to me for the completion of this study.

Sixth, I also extend my gratitude to the staff members and management body of ACT for their cooperation in providing necessarily data.

Furthermore, my indebted gratitude is expressed to all of my families and friends for their encouragement in completing this research paper.

Name: Ahmed Y. Hassen

Signature: 

Date: 02/07/202

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Acronyms

COD -----	Cash on delivery
NPV -----	Net present value
IRR -----	Internal rate of interest
BCR -----	Benefit-cost ratio
PBP -----	Payback period
ARR -----	Accounting Rate of Interest
BEA -----	Break-Even Analysis
DMS -----	delivery management system
LLC -----	Limited Liability Company
COGS -----	Cost of goods sold

Executive summary

Establishing a reliable and efficient last-mile delivery network presents a significant opportunity to unlock the full potential of Ethiopia's e-commerce market. This feasibility study explores the potential of establishing a last-mile delivery company in Ethiopia, addressing the growing demand for efficient logistics within the rapidly expanding e-commerce sector. The study examines market opportunities, technical requirements, and operational considerations, employing a mixed-method approach that includes literature review, surveys, and case studies. Key findings highlight the significant untapped market for reliable delivery service in Ethiopia. By leveraging local partnerships and advanced technologies, the proposed delivery network aims to enhance logistical efficiency and customer satisfaction.

A central focus of this study is assessing the readiness of the current technology to support a last-mile delivery operation. This includes evaluating the availability and integration of advanced logistics technologies, such as AI-powered route optimization, digital proof of delivery, and automated scheduling systems, tailored to the Ethiopian context.

The financial analysis presents a promising outlook for profitability, driven by competitive pricing and strategic funding initiatives. Initial capital requirements include costs for delivery fleet, technology and equipment, and marketing. Operational costs are projected to start at \$95,000 in Year 1 and increase to \$175,000 by Year 5. Revenue forecasts start at \$500,000 in Year 1 and grow to \$1,500,000 by Year 5, resulting in net incomes of \$145,000 in Year 1 and \$647,000 by Year 5. The projected cash flow indicates a net operating cash flow starting at \$235,000 in Year 1 and reaching \$985,000 by Year 5.

Chapter 1 : Introduction

1.1 Introduction

Ethiopia is one of the fastest-growing economies in Africa, and its e-commerce markets are rapidly growing (Digital-Ethiopia-2025, Singh, 2022). The Ethiopian government recently announced many policies to foster the e-commerce activities in the country (FDRE, 2009, Tesfachew, 2022). In e-commerce, supply chain is crucial for the success of an e-commerce business, as it ensures timely delivery of goods. However, logistics pose a significant challenge for the current Ethiopian e-commerce industry. Specifically, the “Last-Mile Delivery”, is the most challenging and expensive part of the e-logistics process. In Ethiopia, reaching remote and rural area areas can be particularly difficult due to inadequate address systems and lack of infrastructure, making timely and cost-effective deliveries a challenge.

In this project, we address the Last-Mile Delivery challenges by proposing to establish a localized logistics (a last mile delivery) company. This project could significantly improve the last-mile delivery in Ethiopia, it not only enhances logistical efficiency but also contribute to local economic development. The company will create job opportunities for the local community, which can yield significant economic and social benefits (JCC, 2019). In addition to the employment, it also contributes to skill development and economic growth within these communities, and increase the awareness of the communities by fostering goodwill within the community, potentially leading to long-term sustainability for the e-commerce industry.

Furthermore, by hiring locally can enhance the understanding of the region’s specific challenges, such as inadequate address systems, limited technology, lack of connectivity, and deficient road infrastructure. This localized shipping method enables the development of more customized and effective solutions to address the last mile delivery issues.

1.2 Background of the Project

Last-mile delivery refers to the final stage of the delivery process, i.e. from the distribution hub to the customer’s doorstep. Last mile delivery begins from a warehouse or distribution center, a package is picked up by a carry, and delivered to the consumer, usually at their door step. The last-mile delivery has the substantial effect on e-commerce because it has many direct connections

with the consumers. In developing countries, last mile delivery success can greatly impact the economy, social welfare, and the awareness of the society toward e-commerce (Crainic, 2016). In addition, in developing countries last mile delivery faces unique challenges, such as security, infrastructure constraints, and limited access to technology and resources, making it even more important to address and improve as soon as possible (Arviato, 2021, De Guimarães, 2020). The recent growth of e-commerce and government plan in Ethiopia amplified the complexity of the last mile delivery and shows the need of new sustainable and flexible delivery methods (*Digital Ethiopia 2025*).



Figure 1. Final-mile delivery process

Currently there are few last-mile delivery company operating in Ethiopia, mainly concentrated at the capital city Addis Ababa. Deliver Addis, one of the pioneering companies in this sector, offers a comprehensive range of services, including food delivery from numerous restaurants and delivery of groceries and other goods. This company has leveraged technology to streamline its operations and ensure timely deliveries, thereby setting a benchmark in the industry. Another notable player is ZayRide, which started as a ride-hailing service and later diversified into logistics, In parallel with the growth of last-mile delivery companies, logistics tech startups are also making their mark in Ethiopia. HelloCash Logistics, a subsidiary of the HelloCash mobile money platform, integrates financial technology with logistics to facilitate seamless transactions and efficient delivery operations. Kifiya Financial Technology, initially focused on financial services, has

expanded into logistics, offering comprehensive solutions that bridge the gap between finance and delivery services.

Despite their innovative approaches, these companies face several challenges. Infrastructure limitations, the digital divide also poses a significant barrier, as limited access to digital technologies and the internet in rural areas restricts the reach of tech-enabled delivery services. Additionally, the prevalence of cash-on-delivery transactions creates operational inefficiencies and poses security risks compared to more modern digital payment systems. These startups, while innovative, encounter several drawbacks. One of the primary challenges is the slow adoption of technology among small businesses and consumers, often due to limited digital literacy. Additionally, many logistics tech startups in Ethiopia struggle with capital constraints, which limit their ability to scale operations and innovate effectively.

In this project we study the feasibility of establishing a dedicated last-mile delivery service in Adama City, Ethiopia, utilizing our own fleet of vehicles. This approach will allow us to maintain high service standards, optimize delivery routes, and ensure timely deliveries. By focusing on Adama City, we aim to address the logistical demands of its growing population and economic activities, creating a model of efficiency and reliability that can be replicated in other urban centers across the country.

To enhance convenience and cater to diverse consumer preferences, our service will offer multiple payment options, including cash-on-delivery and digital transactions such as mobile money and online payment platforms. This dual approach broadens our customer base and promotes the adoption of digital payment methods, which are increasingly popular in Ethiopia. Our initiative is designed to overcome local logistical challenges, providing a reliable and efficient delivery service that supports economic growth and improves consumer experiences.

Given the current fast-growing e-commerce in Ethiopia, the need for in-depth understanding and comprehensive assessment of the impact of last mile delivery has become evident. This study can be leveraged to implement strategies for improvement, such as investing in technology, establishing local delivery, or even exploring customized delivery methods to overcome challenges unique to the region.

1.3 Statement and Justification of the Problem

The project aims to investigate and resolve the obstacles hindering the Ethiopian e-commerce sector, particularly in last mile delivery. The project will recognize and addresses challenges such as inadequate addressing systems, limited technology access, and poor road infrastructure, and the local community engagement. The goal is to develop customized solutions for improved e-logistics operation, enhancing accessibility and efficiency for businesses and consumers alike.

This study will contribute to the body of acknowledgement by identifying the challenges the Ethiopian e-logistics faces. The study will provide a general framework to e-commerce enthusiast, startups, policy makers and venture angles.

1.3.1 Statement of problem

The primary problem this project aims to solve is the inefficiency and unreliability of last-mile delivery in Ethiopia's e-commerce sector. This inefficiency is a significant barrier to the growth and development of the e-commerce industry in the country. The magnitude of the problem is evident in the high cost of transportation, delays in delivery, and customer dissatisfaction. These issues are exacerbated by several factors:

- **Inadequate Addressing Systems:** Ethiopia lacks a comprehensive and standardized addressing system, making it difficult for delivery services to locate customers accurately and efficiently.
- **Limited Technology Access:** There is limited access to advanced logistics and delivery technologies, which hampers the ability of e-commerce businesses to optimize routes and track deliveries in real-time.
- **Poor Road Infrastructure:** Many areas, especially rural regions, suffer from poor road conditions, which increases delivery times and operational costs.
- **Local Community Engagement:** There is a need for better engagement with local communities to create job opportunities and improve the overall efficiency of the delivery network.

The extent and prevalence of these problems are significant, affecting the entire e-commerce value chain from retailers to consumers. Businesses struggle with increased operational costs and

inefficiencies, while consumers face delays and unreliable service. This, in turn, limits the potential for e-commerce growth in Ethiopia, which is otherwise poised for expansion given the increasing internet penetration and rising consumer demand.

Compared to other similar initiatives, this project offers several unique and original contributions:

1. **Localized Solutions:** The project focuses on developing solutions that are tailored to the specific needs and challenges of the Ethiopian market. This includes leveraging local partnerships and resources to create a more efficient and sustainable delivery network.
2. **Technology Integration:** By integrating advanced technologies such as AI-powered route optimization, digital proof of delivery, and automated scheduling, the project aims to significantly enhance the efficiency and reliability of last-mile delivery services.
3. **Community Engagement:** The project places a strong emphasis on community involvement, creating job opportunities and fostering skill development within local communities. This approach not only improves logistical operations but also contributes to local economic growth and social development.
4. **Comprehensive Framework:** The study will provide a general framework that can be used by e-commerce enthusiasts, startups, policymakers, and venture capitalists. This framework will outline best practices and strategic insights for overcoming logistical challenges in similar emerging markets.

1.3.2 Justification

Addressing the identified problems is crucial for the growth of Ethiopia's e-commerce sector. By improving last-mile delivery, the project will enhance customer satisfaction, reduce operational costs, and support the expansion of e-commerce businesses. This, in turn, will contribute to the overall development of the digital economy in Ethiopia.

In conclusion, this project addresses a critical bottleneck in Ethiopia's e-commerce sector. By developing innovative, localized solutions for last-mile delivery, the project aims to unlock the full potential of the market, fostering economic growth and improving the quality of life for consumers and communities alike.

1.4 Objective of the Project

1.4.1 General objectives

The main objective of this project is to enhance the efficiency and accessibility of last-mile delivery for e-commerce industry in Ethiopia by addressing logistical challenges and implementing locally customized solutions.

1.4.2 Specific objectives

1. To address issues related to the final stage of the delivery process, specifically targeting locations with inadequate infrastructure and addressing systems.
2. To explore and implement technology solutions tailored for last-mile delivery improvements, such as mobile application, or other relevant tools.
3. To assess the utilization of the local community insights and knowledge of the area to develop efficient delivery networks.

1.5 Scope of the Project

This project concentrates on addressing challenges and implementing solutions pertaining to **last-mile delivery** within the Ethiopia e-commerce sector. It does not encompass broader logistics aspects like transportation beyond the last mile, warehousing, or upstream supply chain management. The focus remains on optimizing the final stage of delivery to consumers or local delivery points within the context of e-commerce logistics in Ethiopia. This project doesn't include delivery from grocery, its only focus on delivery from warehouse or distribution center to the last-arrival.

1.6 Limitations of the Study

The study is primarily focused on Adama City, which may limit the applicability of the findings to other regions in Ethiopia. Differences in infrastructure, economic conditions, and community engagement across various cities and rural areas could affect the feasibility and effectiveness of the proposed solutions. Further, the project aims to address the challenges posed by inadequate addressing systems, limited technology access, and poor road infrastructure, but these are deeply ingrained issues that may require more extensive and long-term solutions beyond the scope of this study. The proposal includes the implementation of technology solutions for route optimization

and delivery management. However, the study may not fully account for the varying levels of digital literacy and access to technology among the target population, which could impact the adoption and effectiveness of these solutions. While the project includes cash on delivery (COD) options, which are crucial in the current Ethiopian market, it may not sufficiently explore the challenges and risks associated with COD, such as security issues and cash handling inefficiencies. The transition to digital payment methods, although mentioned, may also face significant barriers. The scope of the project is confined to last-mile delivery and does not consider broader logistics aspects like transportation beyond the last mile, warehousing, or upstream supply chain management. This limited focus may overlook interdependencies and broader logistical challenges that could impact the success of last-mile delivery.

1.7 Organizations of the study

The study comprises five chapters, beginning with an introduction highlighting the significance of establishing a localized delivery company in Ethiopia's to meet the growing demand for efficient last-mile delivery services in Ethiopia's evolving e-commerce landscape. Chapter two explores the untapped market for reliable and affordable last-mile delivery services in Ethiopia, outlining the potential opportunities and market trends driving the establishment of a localized delivery company. In chapter three we discussed the mixed-method approach employed, including literature analysis, surveys, and case studies, to assess the feasibility and profitability of the proposed last-mile delivery network. The study further examines market feasibility and technical considerations, evaluating the current e-commerce market landscape and essential operational aspects in chapter 4. Chapter 5 Outlines the proposed organizational structure, staffing plan, and management team capabilities essential for establishing and operating the last-mile delivery service in Ethiopia. Chapter 6 concluded and give some future recommendations.

Chapter 2 : Project Concept

2.1 Opportunity study

Ethiopian e-logistics is untapped market. There is a considerable untapped market for reliable and affordable last-mile delivery services, especially in remote and emerging urban areas. The increasing e-commerce sector in Ethiopia presents a treasure of opportunities for local delivery company (Digital-Ethiopia-2025). A few local delivery startups have emerged recently, but their coverage and service are limited, specifically the existing delivery startups focus on food and grocery deliveries within limited area of the capital city. The increasing users of internet, rising demand for convenient and reliable online shopping, growth of mobile money, and government initiatives to support the development of digital infrastructure and logistics service presents a highly favorable landscape for the establishment of a local delivery company. Considering these factors, the project aligns well with the current trends and future growth trajectories, to capitalize on the increasing demand for efficient last-mile delivery services, especially in remote and emerging urban areas. On the other hand, leveraging technology solutions for logistics and delivery operations presents opportunities for efficiency improvement and enhanced customer experiences. Forming strategic partnerships with e-commerce platforms, local business can create a robust ecosystem for delivery services. In addition, as the main aim of the project is to establish a localized delivery company the focus will be on local investors and ventures, which aligns well with the ethos of creating a business deeply rooted in the community to bring strategic partners who are deeply connected to the local landscapes.

2.2 The project Concept and Profile

The goal of the project is to establish a localized delivery company, with objective of providing efficient, reliable last mile delivery services. There is a rising demand for convenient and reliable delivery services due to the growing e-commerce landscape. The beneficiaries of the company are consumers, e-commerce platforms, local economy and government, with a potential stake holders like investors and local community. The available resources are potential last-mile delivery hub (suq), local workforce, local ventures, delivery vehicle (bajaj, motorbike) and technology providers. The project fully aligned with the national plans and polices to contributes to economic growth by fostering the development of the digital economy and to improve logistics infrastructure

and support services. The potential positive impacts of the project are job creation, economic growth, improved access to services and enhanced competitiveness of the e-commerce industry. Given the growing demand for e-commerce and delivery services, along with the support of government policies, investors, and potentiality of creating job for the local community, the project stands a good chance of achieving its objectives.

2.3 Preliminary study

This project aims to assess the feasibility and develop a strategic plan for establishing a last-mile delivery network dedicated to serving the growing e-commerce market in Ethiopia. The last-mile delivery industry involves the movement of goods from a transportation hub to the final destination, typically a customer's doorstep. It's crucial for businesses that rely on timely and efficient deliveries to maintain customer satisfaction and loyalty. The feasibility of this project will be evaluated from four key perspectives: product/service appeal, entrepreneurial readiness, financial feasibility, and industry and market feasibility.

The proposed last-mile delivery network is designed to address specific needs within the Ethiopian e-commerce market. By focusing on local partnerships, integrating advanced technology for route optimization, and offering cash on delivery (COD) options, this service aims to enhance logistical efficiency and customer satisfaction. The appeal of this service to potential customers lies in its ability to provide reliable, timely, and cost-effective delivery solutions. E-commerce businesses will benefit from improved delivery times and reduced logistical costs, while consumers will enjoy the convenience of dependable delivery services, increasing overall customer loyalty and satisfaction.

The success of this project will hinge on the readiness and capability of the entrepreneurs involved. We will research and develop the necessary skills, experience, and knowledge to implement and manage a last-mile delivery network. We will gain a deep understanding of the local market dynamics, logistical challenges, and technological requirements. By leveraging our growing experience in the logistics and e-commerce sectors and building a strong network of local contacts and partners, we will position ourselves to execute this project effectively. Additionally, we will commit to continuous learning and adaptation to ensure that our service remains competitive and meets the evolving needs of the market.

Financial feasibility is a critical aspect of this project. Initial capital investment will be required for technology integration, acquisition of delivery vehicles, and establishment of operational infrastructure. A detailed financial plan will be developed to outline the expected costs and revenue streams, ensuring the project's profitability. Revenue will be generated through delivery fees charged to e-commerce businesses, with competitive pricing strategies designed to attract and retain clients. We will also explore potential funding sources, including venture capital, grants, and partnerships with local financial institutions, to secure the necessary capital for startup and expansion phases.

The Ethiopian e-commerce market is experiencing rapid growth, driven by increasing internet penetration, rising consumer demand, and an expanding middle class. However, the market's potential is currently hindered by inadequate last-mile delivery infrastructure. By addressing this gap, our project aims to unlock significant opportunities for e-commerce businesses and contribute to the digital economy's growth. We will conduct a comprehensive market analysis to understand the competitive landscape, identify key market trends, and assess customer needs. This analysis will inform our strategic decisions and ensure that our service is well-positioned to capture a significant market share.

To summarize, the current available resources and technology provide a solid foundation for establishing the proposed last-mile delivery company. By carefully considering product appeal, entrepreneurial readiness, financial feasibility, and industry and market viability, we can develop a sustainable and profitable solution that meets the needs of the Ethiopian e-commerce market. This project has the potential to significantly improve last-mile delivery services in Ethiopia, enhance logistical efficiency, create job opportunities, and contribute to local economic development, ultimately fostering long-term sustainability for the e-commerce industry.

Chapter 3 : Project Methods and Procedure

3.1 Project Design

This project will employ a mixed-method approach, combining analyzing existing literature, industry reports, and conducting surveys of e-commerce businesses and consumers in Ethiopia, and comparing successful last-mile delivery models in other developing countries with similar characteristics to Ethiopia. In addition, the project will develop a case study to assess the viability and profitability of the proposed last-mile delivery network

3.2 Types of data

This project feasibility study will take primary data from manufacturers, and organizations and secondary data from other printed materials, magazine, literature and experimental, qualitative, and descriptive types of data will be used to assess the feasibility of this project.

3.3 Sources of data

The sources of data for this project are the existing market research reports, government publications, academic papers, and industry databases related to the e-commerce and logistics sectors in Ethiopia.

3.4 Data collection methods and tools

The data collection methods in this project are

- 1) Observations- Direct observations of last-mile delivery operations and customer interactions.
- 2) Literature review- reviewing existing reports, policies, and literature relevant to the e-commerce and logistics landscape in Ethiopia.

3.5 Data analysis methods and tools

Data analysis of this project will be Net present value (NPV), Internal rate of interest (IRR), Benefit-cost ratio (BCR), Payback period (PBP), Accounting Rate of Interest (ARR), and Break-Even Analysis (BEA) to check the feasibility of the project.

3.6 SWOT Analysis

SWOT analysis provides a preliminary assessment of the internal strengths and weaknesses as well as external opportunities and threats that may impact the establishment of a last-mile delivery company in Ethiopia.

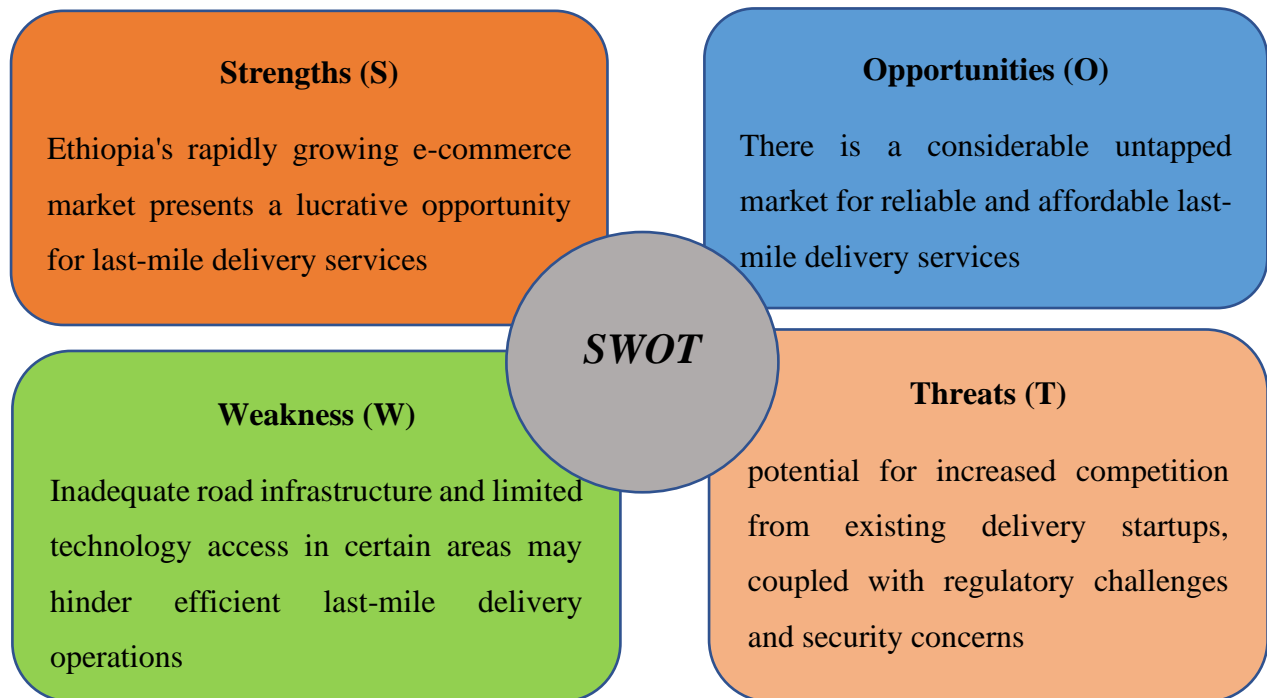


Figure 2. SWOT Analysis.

3.7 Schedule

The schedule for this project is given in table below.

Table 1. Timeline of the project

Research plan	Year (2024)					
months	01	02	03	04	05	06
1 st draft proposal preparation						
Final draft proposal						
Literature review						
developing the case study						
1 st draft preparation						
Final draft project preparation						

Chapter 4 : Market Feasibility and Technical Considerations

4.1 Market Feasibility

4.1.1 Industry or marketplace description

The e-commerce market in Ethiopia is still in its nascent stage but is witnessing rapid growth. With a population exceeding 130 million and increasing internet penetration, there is immense potential for expansion. The market encompasses various sectors, including retail, electronics, fashion, food delivery, and more. While urban areas have higher adoption rates, there's a growing interest in online shopping among rural populations as well. The future of the Ethiopian e-commerce market looks promising, with expectations of continued growth driven by factors such as increasing internet accessibility, rising disposable income, and a growing young population. Moreover, advancements in digital payment systems and infrastructure improvements will likely further accelerate market expansion. The Ethiopian e-commerce market is currently undergoing rapid change and restructuring. Traditional retail models are being challenged by the rise of online shopping platforms, leading to shifts in consumer behavior and business strategies. The e-commerce industry in Ethiopia is still in the emerging stage. While it has gained traction in recent years, there's considerable room for growth and development. The market segment is experiencing rapid growth, fueled by increasing consumer demand and improving infrastructure. However, it's essential to navigate the challenges associated with this early stage, including logistical hurdles, regulatory frameworks, and consumer trust issues. Solving the logistical hurdles is the main focus of this project.

4.1.2 Industry competitiveness

Currently, the Ethiopian e-commerce market exhibits a mix of both large players and smaller businesses. While there are dominant platforms operating nationwide, there's also a proliferation of smaller retailers and niche players catering to specific segments or regions.

Major competitors in the Ethiopian e-commerce market include both domestic and international players. Local companies such as Jumia Ethiopia and Shebilo are among the prominent players, along with international platforms like Alibaba's AliExpress. While the e-commerce market in

Ethiopia is growing, there are still significant barriers to entry for new competitors. These barriers include:

- Limited internet infrastructure and connectivity, especially in rural areas.
- Challenges related to logistics and last-mile delivery, including inadequate transportation networks and address systems.
- Regulatory complexities and licensing requirements for operating e-commerce businesses.

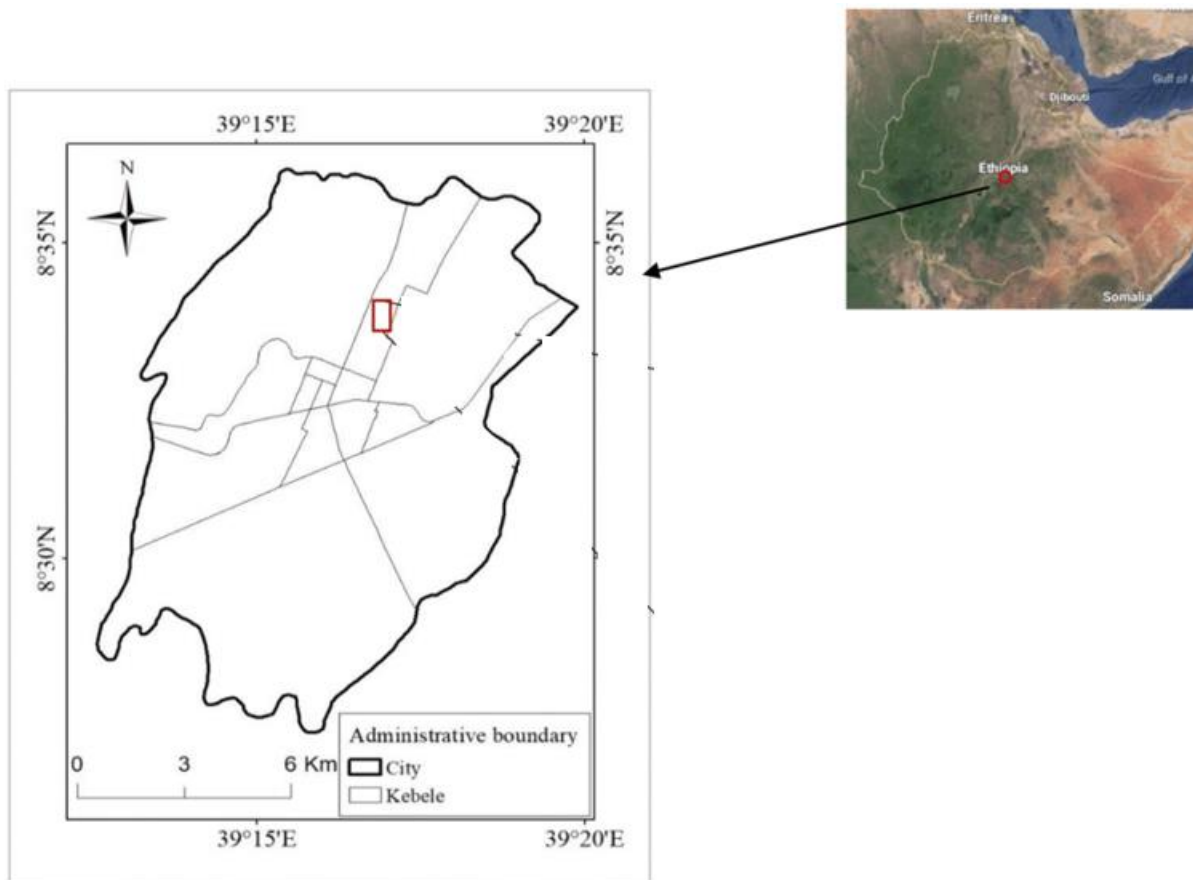


Figure 3. study area, Adama city

However, as infrastructure improves and regulatory frameworks evolve, these barriers may become less formidable over time. Input suppliers for e-commerce businesses in Ethiopia include logistics providers, payment gateways, and technology vendors. While there may be multiple options available, the concentration and competitiveness of these suppliers can vary. Price competitiveness in the Ethiopian e-commerce market is influenced by various factors, including:

- Pricing strategies adopted by competitors.
- Cost structures related to logistics, payment processing, and inventory management.
- Consumer perception of value and willingness to pay for convenience and quality.

As the market matures and competition intensifies, maintaining competitive pricing while ensuring profitability will be a key challenge for businesses. For this case study we choose Adama city for its strategic location along the major transportation corridor between Addis Ababa, the capital, and the southern regions of Ethiopia. This location provides excellent connectivity to various parts of the country, facilitating efficient distribution and delivery routes.

4.1.3 Specific market potential

The Ethiopian e-commerce market can support both commodity and differentiated products/services. While basic commodities like household goods and electronics may have a more commoditized market, there's also significant potential for differentiated offerings such as unique artisanal products, niche fashion items, and specialty goods catering to specific consumer preferences. Demand for e-commerce in Ethiopia is on the rise, driven by factors such as increasing internet penetration, urbanization, and changing consumer behavior, especially among the younger population. There are several emerging and niche market opportunities within the Ethiopian e-commerce landscape. These could include:

- Catering to specific demographic segments such as millennials or urban professionals with tailored product offerings and marketing strategies.
- Tapping into underserved markets in rural areas by addressing logistical challenges and offering relevant products and services.
- Exploring niche product categories or industries with high growth potential, such as organic foods, sustainable products, or premium fashion.

There's significant potential for branded products to differentiate themselves and build trust and loyalty among Ethiopian consumers. Establishing a strong brand identity can help set our offerings apart from competitors and create a loyal customer base. Market usage of e-commerce platforms in Ethiopia is expanding, but there's still ample room for growth, particularly in rural and underserved areas.

4.2 Technical Considerations

While we're not a traditional factory setting up production lines, there are crucial technical aspects to consider before launching our last-mile delivery service in Ethiopia. Let's delve into the key areas that will form the backbone of our operations

4.2.1 Facility needs

Our facility needs will depend on the delivery model we choose. If we opt for a hub-and-spoke model with central sorting, we'll need a warehouse or sorting center. The size will depend on the anticipated package volume – a small office might suffice for initial operations, but we can scale up as our business grows. We'll also need dedicated office space for our administrative staff, IT team, and potentially a customer support call center. Here, the size will be determined by our initial team and future growth projections.



Figure 4. last mile delivery warehouse

4.2.2 Delivery Fleet

The type of vehicles in our fleet will depend on several factors. We need to consider the delivery range, typical road conditions in our target areas, and the types of goods we'll be delivering. Motorbikes might be suitable for urban areas with good roads, while bicycles could be an eco-friendly option for shorter distances. Vans or even cargo tricycles (bajajs) – a common sight in Ethiopia – could be ideal for bulkier deliveries or longer distances. Depending on the size of our fleet, we might need to establish a basic maintenance facility for minor repairs or partner with existing service centers to keep our vehicles running smoothly.



Figure 5. delivery electric cargo tricycle

4.2.3 Technology Stack

Technology will be the engine driving our efficiency. We'll need a robust delivery management system (DMS) as the core. This software platform should handle order management, route optimization, driver tracking, and real-time delivery updates for our customers. Cloud-based solutions offer scalability and adaptability as our business grows. Additionally, a mobile app for customers to track deliveries, place orders, and manage accounts could be a valuable tool. Finally, securing reliable internet connectivity throughout our operational area is crucial for smooth operation. We'll need to research the available options based on location and budget.



Figure 6. Last mile delivery route planning and optimization

4.2.4 Other considerations

Human Resources: Our delivery personnel are the backbone of our service. We'll need to recruit qualified individuals with a good understanding of the areas we plan to serve. The Ethiopian job market offers a potential pool of talent, so let's assess wage rates, identify any training needs, and determine the required skillsets (like motorbike licenses) for our chosen vehicle types. Leading this team effectively requires a skilled management team with experience in logistics, operations, and technology. Recruiting the right people will be crucial for our success.

Regulatory Landscape: Before launching, we need to ensure we're compliant with all regulations. This means obtaining the necessary business permits and licenses specifically for operating a delivery service in Ethiopia. Additionally, our delivery personnel must be familiar with and follow all traffic regulations specific to their assigned vehicles.

By carefully considering these technical aspects, we can build a strong foundation for our last-mile delivery service. Thorough research and planning now will ensure we make informed decisions that contribute to the long-term success of our business and provide a seamless delivery experience for our customers in Ethiopia

Chapter 5 : Organization Structure and Financial Projections

This chapter lays the foundation for our last-mile delivery service in Ethiopia by outlining the proposed organizational structure, staffing plan, and management team capabilities. Building a robust and efficient organization is the cornerstone of any successful startup. Establishing a robust and efficient structure will be critical for ensuring operational effectiveness and maximizing our potential for success.

5.1 Business Structure

5.1.1 Legal Structure

We propose establishing the last-mile delivery service as a **Limited Liability Company (LLC)**:

This structure offers several advantages:

- **Limited Liability:** LLC ownership protects founders' personal assets from business liabilities, mitigating financial risks.
- **Flexibility:** LLCs offer more flexibility in management structure and profit sharing compared to corporations.
- **Taxation:** LLCs are considered "pass-through" entities, where profits and losses pass directly to the owners, avoiding double taxation.

5.1.2 Staffing and Governance Structure

Our initial staffing will be lean, focusing on core competencies. We will adopt a **flat organizational structure**: promoting open communication and collaboration across teams. The key roles will include:

- **Delivery Operations Manager:** Oversees delivery personnel, route optimization, and vehicle maintenance.
- **Marketing & Sales Manager:** Leads customer acquisition efforts, develops partnerships with e-commerce businesses, and manages marketing campaigns.
- **Technology & IT Specialist:** Manages the delivery platform, mobile app (if applicable), and ensures system security and functionality.

- **Finance & Accounting Specialist:** Handles financial reporting, bookkeeping, and manages cash flow.

As the business grows, we will strategically add staff to support expansion and enhance efficiency.

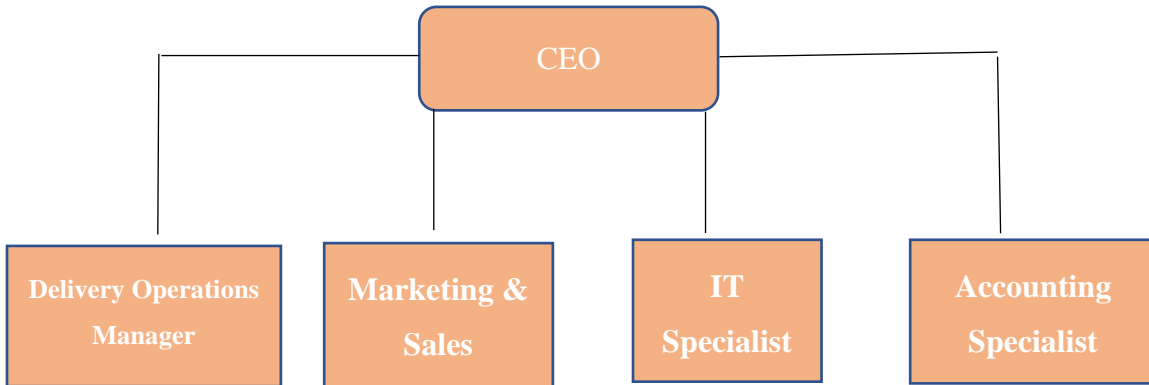


Figure 7. flat organization structure

5.1.3 Management Team

The project will be spearheaded by a team of experienced and passionate individuals with a proven track record in relevant industry/field. Each member brings a unique skill set and a strong commitment to building a successful last-mile delivery service.

We are also committed to attracting and retaining skilled staff by offering competitive compensation and benefits packages, fostering a positive work environment, and providing opportunities for professional development.

5.1.4 Partnerships and Stakeholders

We will actively explore potential partnerships with established delivery companies or logistics providers to leverage their existing infrastructure and expertise. This could lead to a **joint venture**: arrangement, combining resources and knowledge to accelerate our market penetration.

Furthermore, we recognize the importance of building strong relationships with key stakeholders:

- **E-commerce Businesses:** Collaboration with e-commerce platforms will be crucial for reaching potential customers and offering seamless delivery solutions.

- **Government Agencies:** Engaging with relevant government departments can provide access to resources, support initiatives, and ensure compliance with regulations.
- **Investors and Financial Institutions:** Securing funding will be essential for growth. Building relationships with investors and financial institutions allows for potential funding opportunities.

5.1.5 Availability of Consultants and Service Providers

Recognizing the need for specific expertise, we will engage experienced consultants and service providers to supplement our internal team. This may include:

- **Legal Counsel:** Guidance on navigating Ethiopian business regulations and legal compliance.
- **Accounting Firm:** Ensuring accurate financial reporting and adherence to accounting standards.
- **Industry Experts:** Experts in logistics and last-mile delivery can provide valuable insights and best practices.

By leveraging the expertise of external professionals, we can address critical areas and navigate potential challenges effectively.

5.2 Financial Projections

This section outlines the financial projections for establishing our last-mile delivery network in Ethiopia. It will assess the financial viability of business plan and inform investment decisions.

5.2.1 Capital Requirements

Start-up Costs:

- **Delivery Fleet:** This includes the initial purchase or lease cost of delivery vehicles (motorcycles, bikes, etc.) based on chosen delivery model and operational scale.
- **Technology & Equipment:** Estimate the cost of acquiring necessary software, mobile applications, or other information technology infrastructure.

- **Marketing & Promotion:** Project the initial investment required for marketing and promotional activities to reach your target audience.
- **Working Capital:** Factor in initial reserves for operational expenses like fuel, vehicle maintenance, and salaries before reaching profitability.

Operational Costs:

- Ongoing vehicle maintenance, fuel costs, delivery personnel salaries, and administrative expenses will be further detailed in the operating budget.

5.2.2 Balance Sheet Projections

In projecting the balance sheet, current assets encompass projected initial cash reserves, potential customer deposits, and cash on delivery (COD) collections. Accounts receivable estimation is based on anticipated outstanding customer payments aligned with payment terms. Optionally, inventory can include prepaid delivery supplies or equipment like bikes or uniforms. Fixed assets consist of projected costs for delivery vehicles (motorcycles, bikes, etc.) and technology infrastructure such as software or mobile apps. Furniture and fixtures may be included if office needs are relevant. Liabilities section outlines current liabilities, including outstanding payments to vendors, short-term loans for initial investment, and accrued expenses like unpaid wages or utilities. Long-term liabilities may entail financing for vehicle purchases or equipment. Shareholders' equity indicates the equity invested by founders or shareholders and the section for retained earnings reflects accumulated profits over time. In Table 2, a comprehensive breakdown of the balance sheet projections is provided.

5.2.3 Income Statement Projections

In the income statement projections revenue forecasts are based on delivery fees calculated according to delivery volume and pricing strategies, with considerations for service tiers and optional value-added services such as pick-up services or cash on delivery fees. Cost of goods sold (COGS) includes estimated fuel expenses determined by vehicle type, delivery volume, and fuel prices, along with ongoing maintenance costs for the delivery fleet, personnel costs, and optional expenses for packaging materials. Operating expenses encompass projected costs for marketing, technology and software subscriptions, rent and utilities, and administrative functions.

Table 2. Balance Sheet Projections

Item	Year 1	Year 2	Year 3	Year 4	Year 5
Current Assets					
Cash & Cash Equivalents	\$100,000	\$150,000	\$200,000	\$300,000	\$400,000
Accounts Receivable	\$50,000	\$70,000	\$90,000	\$120,000	\$150,000
Delivery Vehicles	\$200,000	\$250,000	\$300,000	\$350,000	\$400,000
Technology & Equipment	\$100,000	\$150,000	\$200,000	\$250,000	\$300,000
Total Assets	\$450,000	\$620,000	\$790,000	\$1,020,000	\$1,250,000
Current Liabilities					
Accounts Payable	\$50,000	\$60,000	\$70,000	\$80,000	\$90,000
Short-Term Loans	\$50,000	\$70,000	\$90,000	\$110,000	\$130,000
Accrued Expenses	\$50,000	\$60,000	\$70,000	\$80,000	\$90,000
Long-Term Liabilities					
Long-Term Loans	\$100,000	\$120,000	\$140,000	\$160,000	\$180,000
Total Liabilities	\$250,000	\$310,000	\$370,000	\$430,000	\$490,000
Shareholders' Equity					
Common Stock	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000
Retained Earnings	\$100,000	\$210,000	\$320,000	\$490,000	\$660,000
Total Liabilities & Equity	\$450,000	\$620,000	\$790,000	\$1,020,000	\$1,250,000

Additionally, depreciation and amortization spread the cost of fixed assets over their useful life, while interest expenses on loans and estimated income tax expenses based on projected profits and Ethiopian tax regulations are factored in, ultimately resulting in the net income reflecting the projected profit after accounting for all expenses. Table 3 outlines the income statement projections in detail. Revenue forecasts include projected income from delivery fees, determined by delivery volume and pricing strategies, with additional consideration for service tiers and potential value-added services.

5.2.4 Cash Flow Projections

The cash flow statement includes three key components: operating, investing, and financing cash flows. Operating cash flow monitors cash inflows and outflows from core business operations, including delivery fee collections and value-added service income, offset by expenses such as delivery personnel costs, fuel expenses, and administrative expenses.

Table 3. Income Statement Projections

Item	Year 1	Year 2	Year 3	Year 4	Year 5
Revenues	\$500,000	\$700,000	\$900,000	\$1,200,000	\$1,500,000
Delivery Fees	\$500,000	\$700,000	\$900,000	\$1,200,000	\$1,500,000
Total Revenues	\$500,000	\$700,000	\$900,000	\$1,200,000	\$1,500,000
Cost of Goods Sold (COGS)					
Fuel Costs	\$50,000	\$70,000	\$90,000	\$120,000	\$150,000
Vehicle Maintenance	\$20,000	\$25,000	\$30,000	\$35,000	\$40,000
Delivery Personnel Costs	\$100,000	\$130,000	\$160,000	\$190,000	\$220,000
Total COGS	\$170,000	\$225,000	\$280,000	\$345,000	\$410,000
Gross Profit	\$330,000	\$475,000	\$620,000	\$855,000	\$1,090,000
Operating Expenses					
Marketing & Advertising	\$20,000	\$25,000	\$30,000	\$35,000	\$40,000
Technology & Software	\$15,000	\$18,000	\$21,000	\$24,000	\$27,000
Rent & Utilities	\$10,000	\$12,000	\$14,000	\$16,000	\$18,000
Administrative Expenses	\$50,000	\$60,000	\$70,000	\$80,000	\$90,000
Total Operating Expenses	\$95,000	\$115,000	\$135,000	\$155,000	\$175,000
Operating Income	\$235,000	\$360,000	\$485,000	\$700,000	\$915,000
Depreciation & Amortization	\$30,000	\$35,000	\$40,000	\$45,000	\$50,000
EBIT (Earnings Before Interest & Tax)	\$205,000	\$325,000	\$445,000	\$655,000	\$865,000
Interest Expense	\$10,000	\$12,000	\$14,000	\$16,000	\$18,000
Pre-tax Income	\$195,000	\$313,000	\$431,000	\$639,000	\$847,000
Income Tax Expense	\$50,000	\$80,000	\$110,000	\$160,000	\$200,000
Net Income	\$145,000	\$233,000	\$321,000	\$479,000	\$647,000

Investing cash flow tracks cash utilized for asset acquisition or disposal, encompassing expenditures on delivery vehicles, technology, or office furniture. Financing cash flow monitors cash movements from financing activities, including equity investments or loans received, balanced against loan repayments or dividend disbursements. The net cash flow indicates the overall change in cash balance for the period, offering insight into the financial health and liquidity of the business. The detailed prices are given in Table 4

Table 4. Cash Flow Projections

Item	Year 1	Year 2	Year 3	Year 4	Year 5
Operating Cash Flow					
Cash Inflows (Delivery Fees, etc.)	\$500,000	\$700,000	\$900,000	\$1,200,000	\$1,500,000
Cash Outflows (Expenses)	-\$265,000	-\$330,000	-\$395,000	-\$455,000	-\$515,000
Net Operating Cash Flow	\$235,000	\$370,000	\$505,000	\$745,000	\$985,000
Investing Cash Flow					
Cash Outflows (Vehicles, Equipment)	-\$320,000	-\$400,000	-\$500,000	-\$600,000	-\$700,000
Net Investing Cash Flow	-\$320,000	-\$400,000	-\$500,000	-\$600,000	-\$700,000
Financing Cash Flow					
Cash Inflows (Investments, Loans)	\$100,000	\$0	\$0	\$0	\$0
Cash Outflows (Loan Repayments)	-\$20,000	-\$25,000	-\$30,000	-\$35,000	-\$40,000
Net Financing Cash Flow	\$80,000	-\$25,000	-\$30,000	-\$35,000	-\$40,000
Net Cash Flow	-\$5,000	-\$55,000	-\$25,000	\$110,000	\$245,000

5.2.5 Break-Even Analysis

- Calculate the minimum volume of deliveries or revenue required to cover all your business expenses (reaching Net Income of \$0).
- This helps determine how quickly you need to scale your operations to achieve profitability.

To calculate the minimum volume of deliveries or revenue required to cover all business expenses and reach a net income of \$0, we need to perform a break-even analysis. This analysis helps determine the level of sales needed to cover both fixed and variable costs.

The formula to calculate the break-even point in units (deliveries) is:

$$Break - even\ point\ (in\ units) = \frac{Total\ Fixed\ Costs}{Revenue\ per\ delivery - Variable\ Cost\ per\ delivery}$$

And to calculate the break-even point in revenue, we use:

$$Break - even\ point\ (in\ revenue) = Break - even\ point\ (in\ units) \times Revenue\ per\ delivery$$

Given the provided income statement projections, we'll need to identify the fixed and variable costs. Assuming that only delivery fees are considered as revenue and the variable cost per delivery

includes fuel costs, vehicle maintenance, and delivery personnel costs, the break-even analysis can be performed as follows:

1. Calculate the total fixed costs.
2. Determine the revenue per delivery and variable cost per delivery.
3. Use the formulas above to find the break-even point in units and revenue.

Let's calculate:

1. **Total Fixed Costs:** These are costs that do not vary with the number of deliveries and typically include expenses like rent, utilities, salaries of permanent staff, etc. From the provided data, let's assume the total operating expenses represent the fixed costs. $\text{Total Fixed Costs} = \text{Total Operating Expenses}$
2. **Revenue per Delivery:** This is the average revenue generated per delivery. From the provided data:

$$\text{Revenue per Delivery} = \frac{\text{Total Revenues}}{\text{Number of Deliveries}}$$

We'll use the given total revenues and assume that each revenue corresponds total delivery.

3. **Variable Cost per Delivery:** This includes costs directly associated with each delivery, such as fuel costs, vehicle maintenance, and delivery personnel costs. From the Cost of Goods Sold (COGS) in the Income Statement Projections:
 - Fuel Costs
 - Vehicle Maintenance
 - Delivery Personnel Costs

Let's perform the calculations for each year to find the break-even point in units and revenue.

Let's calculate the break-even point for each year:

1. **Total Fixed Costs:**

From the Income Statement Projections:

Item	Year 1	Year 2	Year 3	Year 4	Year 5
Total Operating Expenses	\$95,000	\$115,000	\$135,000	\$155,000	\$175,000

2. Revenue per total deliveries:

Assuming total revenues correspond to the total number of deliveries

Item	Year 1	Year 2	Year 3	Year 4	Year 5
Cash Inflows (Delivery Fees, etc.)	\$500,000	\$700,000	\$900,000	\$1,200,000	\$1,500,000

3. Variable Cost per total Deliveries:

- Year 1:
 - Fuel Costs: \$50,000
 - Vehicle Maintenance: \$20,000
 - Delivery Personnel Costs: \$100,000
 - Total Variable Cost per Delivery: \$170,000

Item	Year 1	Year 2	Year 3	Year 4	Year 5
Total COGS	\$170,000	\$225,000	\$280,000	\$345,000	\$410,000

Now, let's use these values to calculate the break-even point in units and revenue for each year:

Let's calculate:

Table 5. The break-even point in units and revenue for each year

Item	Break-even point (in units)
Year 1	$\frac{95,000}{500,000 - 170,000} = 288$
Year 2	$\frac{115,000}{700,000 - 225,000} = 261$
Year 3	$\frac{135,000}{900,000 - 280,000} = 217$
Year 4	$\frac{155,000}{1,200,000 - 345,000} = 160$
Year 5	$\frac{175,000}{1,500,000 - 410,000} = 134$

5.2.6 Financing Strategy

To secure the necessary capital for launching and operating your last-mile delivery service, you can explore various financing options. Securing the initial capital for our last-mile delivery service is crucial for a successful launch and sustained growth. While various financing options exist, we have chosen to focus on securing debt financing through established Ethiopian banks. Debt financing, particularly from commercial banks, offers several advantages for our startup. Firstly, it allows us to maintain ownership and control of the company, unlike equity investments which dilute ownership. Secondly, loan repayments are typically spread out over a defined period, providing a predictable financial structure during the critical early stages of our business. We will explore loan options offered by commercial banks, development finance institutions, and microfinance institutions specifically catering to Ethiopian businesses. While researching potential grants to support last-mile delivery solutions in Ethiopia remains a possibility, our primary focus will be on securing a debt financing package that aligns with our business goals and financial needs.

Chapter 6 : Conclusions and Future Recommendations

6.1 Conclusions

The proposed project to establish a last-mile delivery company in Ethiopia is both timely and strategically important. Ethiopia's e-commerce market is growing rapidly, yet it faces significant logistical challenges, particularly in last-mile delivery. These challenges include inadequate infrastructure, poor road conditions, limited access to technology, and inefficient addressing systems. By focusing on these pain points, the project aims to enhance the efficiency and reliability of last-mile delivery services, which is crucial for the growth of e-commerce in the region.

The feasibility study and market analysis indicate a substantial untapped market for reliable last-mile delivery services. The integration of local partnerships, technology for route optimization, and cash-on-delivery (COD) options are identified as key strategies for success. The localized approach, employing local workforce and resources, not only addresses logistical issues but also contributes to local economic development by creating jobs and fostering skills within the community.

Financial projections and SWOT analysis demonstrate that the project has a strong potential for profitability and sustainability. The increasing internet penetration, rising demand for e-commerce, and supportive government policies further enhance the prospects of the proposed last-mile delivery company. However, the project must navigate potential threats such as regulatory challenges, security concerns, and competition from existing delivery startups.

In conclusion, establishing a last-mile delivery company in Ethiopia is a viable and beneficial endeavor. It promises to significantly improve logistical efficiency, support the e-commerce sector's growth, and contribute to the overall economic development of the region.

6.2 Future Recommendations

1. Leverage Technology for Efficiency:

- Implement advanced delivery management systems (DMS) and mobile applications for real-time tracking, route optimization, and customer interaction.

Embrace AI-powered tools for predictive analytics and demand forecasting to improve delivery efficiency and customer satisfaction.

2. Focus on Local Workforce Development:

- Invest in training programs to enhance the skills of the local workforce, particularly in logistics and technology. Employing locals can provide better insights into regional challenges and foster community support for the business.

3. Explore Innovative Delivery Methods:

- Investigate the use of alternative delivery methods such as drones, autonomous vehicles, and eco-friendly transportation options like bicycles and electric vehicles. These methods can reduce costs and improve efficiency, particularly in areas with poor infrastructure.

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