AMERICAN COLLEGE OF TECHNOLOGY

DEPARTMENT OF BUSINESS STUDIES

MASTER OF BUSINESS ADMINISTRATION PROGRAM

EXPANSION ON EXISTING PRODUCTION OF BICYCLE

A PROJECT SUBMITTED TO THE DEPARTMENT OF BUSINESS STUDIES

OF AMERICAN COLLEGE OF TECHNOLOGY

AS A PARTIAL FULFILLMENT OF THE REUIRMENT OF THE AWARD OF

MASTER OF BUSINESS ADMINSTRATION

By

TINBITE NEBIYOU

Advisor

ASMAMAW MENGISTE, PHD

DECEMBER 10 2023

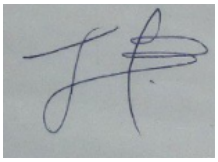
ADDIS ABABA, ETHIOPIA

Declaration

I, TINBITE NEBIYOU hereby declare that a project work entitled EXPANSION ON EXISTING PRODUCTION OF BICYCLE 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 2023 academic year under the supervision and guidance of DR. ASMAMAW MENGISTE 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 10-DECEMBER-2023



Signature of the Candidate

Certificate

This is to certify that the project work entitled EXPANSION ON EXISTING PRODUCTION OF BICYCLE 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 TINBITE NEBIYOU during the period 2023 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. ASMAMAW MENGISTE

Signature: _____

Date: _____

Approval Sheet

AMERICAN COLLEGE OF TECHNOLOGY

DEPARTMENT OF BUSINESS STUDIES

MASTER OF BUSINESS ADMINISTRATION PROGRAM

EXPANSION ON EXISTING PRODUCTION OF BICYCLE

BY: TINBITE NEBIYOU

Id Number: OMBA-382-21A

Approved by:

Advisor

_____	_____	_____
Name	Signature	Date

Internal Examiner

_____	_____	_____
Name	Signature	Date

External Examiner

_____	_____	_____
Name	Signature	Date

Acknowledgment

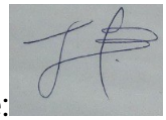
First and foremost, I want to give my thanks to Almighty God for giving me the chance to enjoy the fruits of my Endeavour.

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

Third, 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.

Fourth, I also extend my gratitude to the staff members and management body of AMERICAN COLLEDGE OF TECHNOLOGY for their cooperation in providing necessarily data.

Name: TINBITE NEBIYOU

Signature: 

Date: 10-DECEMBER-2023

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PROJECT EXCEUTIVE SUMMARY

The production of bicycles in Ethiopia presents significant opportunities for growth and development. The industry benefits from a large domestic market and increasing demand for bicycles, both for transportation and leisure purposes. However, addressing challenges such as access to finance, skilled labor, and infrastructure will be crucial for the industry's long-term success. With the right investments and strategic partnerships, Ethiopia can establish itself as a major player in the bicycle production sector, contributing to economic growth and sustainable development.

CHAPTER 1: INTRODUCTION

The purpose of this feasibility study was to analyze the potential for establishing a production and assembly facility for bicycles in Ethiopia. Bicycles are an affordable and eco-friendly means for transportation, widely used by individuals, students, and business.

A bicycle is a two or three-wheeled vehicle with two or three wheels see cycling. Bicycles are critical for transporting people and goods in areas where automobiles are rare. Worldwide, bicycles outnumber vehicles and outsell them three to one. In the Netherlands, Denmark and japan cycling is promoted. Throughout the United States, boles lanes have been constructed and the government promotes bicycles as a viable alternative to automobiles.

The public is starting to recognize the importance of exercise and health. Additionally they have recognized that regular riding may help avoid disorders like obesity. The industry is likely to grow as more people choose cycling as a regular form of exercise. Their attractiveness is aided by events like riding bikes at weekends on the newly opened parks in Addis Ababa.

Due to rising traffic congestion and parking problems many are contemplating bicycle commuting for short distances. Numerous governments including Ethiopia are actively constructing the necessary infrastructure for bicycle commuting, therefore encouraging people to choose bicycles. The lack of necessary infrastructure to support and encourage bicycle commuting particularly in developing economies like Ethiopia is predicted to stymie industry growth.

The objective of this study was to assess the viability and profitability of such an enterprise in Ethiopian market.

1.1. BACKGROUND OF THE PROJECT

Solo bikes is a small sole proprietary business which mainly aims on manufacturing

frames in different designs and assemble its parts which are available in the market, then bring it to the target market. In Ethiopia there is an import of bike 50,000 to 90,000 yearly. The researcher sold 47 bicycles with a price range in 4500 -6800 yet. the researcher had to go to different engineering workshop where the researcher can find welding machines and other accessories in order to get done the frames since I have no the needed machines.

The main idea of this project is to manufacture bicycles frame and assemble different parts of it which are found in the market and to place in the market. There are different types of bicycles to be manufactured like mountain bike, town bike, road bike, and so on. “Bicycles have undoubtedly become an essential part of our daily lives. They continue to revolutionize transport systems, providing an environmentally friendly and sustainable way to travel. Understanding the trends in bicycle production is a key part of creating our sustainable future and so, with a little help, we can help to choose bikes that aren’t just good for us, but for the planet as well.”(Lawrence goozee- sep 26, 2023)

“To fully understand the origin of bicycles, it’s essential to differentiate between the different aspects of ‘making’ a bike, such as design, manufacturing and assembly. We can simplify the process as such design involves conceptualizing and engineering the bike’s major components, as well as its overall functionality. Manufacturers turn these designs into physical parts, constructing and to a certain extent assembling them. The assembly stage involves putting these different components together, at least until the point of sale. When we talk about where bicycles are made, we really mean to say where they are manufactured. It’s common to see bicycles that are designed, manufactured and assembled in three different countries. In fact, manufacturing can also take place in multiple places. Premium frames, for examples, are often produced in Taiwan, but other parts may be produced in other countries if there’s a specialized workforce to do so.”(Lawrence goozee- sep 26, 2023)

On this project the researcher mainly focus on to manufacture the premium frame and assemble other parts by having it from the market.

1.2. OBJECTIVES OF THE PROJECT

General objectives

The general objective of this study is to assess the feasibility of a business specializing in the production and assembly of bicycles in Addis Ababa, Ethiopia.

Specific objectives

- to assess if the business concept is socially and economically feasible
- to assess if the business concept is environmentally or ecologically feasible
- to assess if the business concept is financially feasible
- to assess if the business concept is feasible in light of market demand and competitors
- to assess if the business concept is feasible technically and location wise

1.3. STATEMENT AND JUSTIFICATION OF THE PROBLEM

The current transportation system in Ethiopia is marked by high carbon emission which is pollution, very toxic, harmful to human being causing respiratory, heart disease and cancer, it causes the global warming effect. Using engine combustion transportation system like cars causes accident & high rate of death in Ethiopia. Our current government policy initiates people to use sustainable energy transportation system like city electric train & bicycles. But one of the constraints is shortage of foreign currency to import bicycles & electric train

Manufacturing bicycles in Ethiopia will reduce the shortage of bicycles and the no availability of different designs for different demography. It also improves people's quality of like refreshment, keep healthy and so on. Manufacturing it will have a greater impact in reducing traffic jam and transportation problem.

1.4. SCOPE OF THE PROJECT

The scope of bicycle manufacturing in Ethiopia holds significant potential and can contribute to the country's economic growth and development. Here are some key areas that highlight the scope of bicycle manufacturing in Ethiopia:

1. Domestic Market Demand: Ethiopia has a large population, and there is a growing demand for affordable and sustainable transportation options. Bicycles are an ideal mode of transportation for commuting, especially in urban areas. The scope of bicycle manufacturing lies in meeting this domestic demand and providing quality bicycles at competitive prices.

2. Export Opportunities: Ethiopia's strategic location in East Africa provides access to regional and international markets. With proper marketing and product quality, Ethiopian bicycle manufacturers can explore export opportunities to neighboring countries and beyond. Targeting markets with a higher demand for bicycles or regions with limited local manufacturing capabilities can be a lucrative opportunity for expansion.

3. Job Creation: Establishing bicycle manufacturing facilities in Ethiopia can contribute to job creation and skill development. The industry can provide employment opportunities for both skilled and unskilled workers, enhancing the livelihoods of individuals and contributing to poverty reduction.

4. Value Chain Development: Bicycle manufacturing involves various stages, including sourcing raw materials, production, assembly, distribution, and after-sales services. The scope of bicycle manufacturing in Ethiopia includes the development of a robust value chain, involving local suppliers, manufacturers, distributors, and retailers. This will not only enhance the bicycle industry but also support the growth of related industries and services.

5. Technology Transfer and Innovation: The establishment of bicycle manufacturing facilities in Ethiopia can facilitate technology transfer and knowledge sharing. Collaboration with international manufacturers or technology providers can help introduce advanced manufacturing processes, improve product quality, and drive

innovation in the sector. This can lead to the development of a domestic bicycle industry that is competitive on a global scale.

6. Sustainable Development: Bicycles are an environmentally friendly mode of transportation, promoting sustainable development. By manufacturing bicycles locally, Ethiopia can reduce its reliance on imported bicycles, contribute to a greener economy, and reduce carbon emissions associated with transportation.

In conclusion, the scope of bicycle manufacturing in Ethiopia is promising. Meeting the domestic demand, exploring export opportunities, creating jobs, developing a robust value chain, promoting technology transfer, and contributing to sustainable development are some of the key aspects that highlight the potential and scope of bicycle manufacturing in Ethiopia.

CHAPTER 2: PROJECT CONCEPT

2.1. OPPORTUNITY STUDY

Currently the researcher is producing 26 inch bicycles for adults, if the researcher can have a little investment it's easy to penetrate the market and inject quality product. Why the researcher is only producing 26 inch bicycle is that because of finance related issues to have full equipment to help manufacture in bulk and different frames.

the researchers major competitors are bicycle importers and wholesaler, who stayed for a long period of time in the business so they got a lot of customers around them. To attract their customers to our company we offer low cost and aesthetically designed and different color bicycle for the customers. And the researcher offer perfect customer service as much as possible.

To manufacture the bicycle in fully capacity the needed are 200m^2 workshop, oxygen, acetylene, tig welding machine, notcher adjustable, sanding belt machine, drill press, cutoff, grinder, skilled peoples in computer graphics& engineering graduates and cash of ETB 2,850,500.

By now the researcher is trying to find loan from different banks and we are waiting their responses.

The researcher has done adequate description with nine components of business model canvas.

1. Direct-to-Consumer Online Sales:

Key Partners: Bicycle component suppliers, logistics providers.

Key Activities: Designing, manufacturing, and assembling bicycles.

Value Proposition: High-quality bicycles at competitive prices, direct sales to customers.

Customer Segments: Urban commuters, recreational cyclists, fitness enthusiasts.

Customer Relationships: Online customer support, warranty services.

Channels: E-commerce platform, social media, online marketing.

Revenue Streams: Bicycles sales, accessories sales.

Key Resources: Manufacturing facilities, skilled labor, e-commerce platform.

Cost Structure: Production costs, marketing expenses, logistics costs.

2. Wholesale Distribution to Bicycle Retailers:

Key Partners: Bicycle retailers, component suppliers.

Key Activities: Manufacturing, assembling, and packaging bicycles.

Value Proposition: Reliable supply of bicycles to retailers, competitive pricing.

Customer Segments: Bicycle retailers, independent bike shops.

Customer Relationships: Personalized customer support, after-sales service.

Channels: Direct sales to retailers, trade shows, marketing campaigns.

Revenue Streams: Wholesale bicycle sales, spare parts sales.

Key Resources: Manufacturing facilities, distribution network, sales team.

Cost Structure: Production costs, distribution costs, sales team expenses.

3. Custom Bicycle Manufacturing:

Key Partners: Bicycle component suppliers, bike fitting specialists.

Key Activities: Customizing bicycles to individual specifications.

Value Proposition: Tailored bicycles for optimal comfort and performance.

Customer Segments: Cyclists with specific needs, enthusiasts, professional riders.

Customer Relationships: Personalized consultations, ongoing support.

Channels: Custom bike fitting studios, online customization tools.

Revenue Streams: Custom bike sales, fitting services, accessories sales.

Key Resources: Manufacturing facilities, custom design software, skilled craftsmen.

Cost Structure: Production costs, customization tools, marketing expenses.

4. Bicycle Rental Services:

Key Partners: Tourism agencies, hotels, local authorities.

Key Activities: Manufacturing, maintaining, and managing bicycle fleets.

Value Proposition: Convenient and affordable bicycle rentals for tourists and locals.

Customer Segments: Tourists, city dwellers, recreational cyclists.

Customer Relationships: User-friendly rental platforms, customer support.

Channels: Rental stations, mobile apps, partnerships with tourism agencies.

Revenue Streams: Rental fees, guided tour services, accessories rentals.

Key Resources: Manufacturing facilities, maintenance teams, rental management software.

Cost Structure: Production costs, maintenance costs, marketing expenses.

5. Electric Bicycle Manufacturing:

Key Partners: Electric motor suppliers, battery manufacturers.

Key Activities: Integrating electric motors and batteries into bicycles.

Value Proposition: Eco-friendly and efficient electric bicycles.

Customer Segments: Urban commuters, delivery services, eco-conscious individuals.

Customer Relationships: After-sales service, warranty support.

Channels: Online sales, partnerships with bicycle retailers.

Revenue Streams: Electric bicycle sales, battery replacements, accessories sales.

Key Resources: Manufacturing facilities, electric motor technology, battery expertise.

Cost Structure: Production costs, technology acquisition, marketing expenses.

6. Bicycle Subscription Service:

Key Partners: Subscription platforms, bicycle maintenance providers.

Key Activities: Manufacturing, maintenance, and periodic upgrades of bicycles.

Value Proposition: Convenient and hassle-free bicycle ownership.

Customer Segments: Commuters, students, urban dwellers.

Customer Relationships: Ongoing support, scheduled maintenance.

Channels: Subscription platforms, mobile apps, marketing campaigns.

Revenue Streams: Subscription fees, maintenance packages, accessories sales.

Key Resources: Manufacturing facilities, maintenance teams, subscription platform.

Cost Structure: Production costs, maintenance costs, subscription platform fees.

7. Bicycle Accessories and Parts Manufacturing:

Key Partners: Bicycle manufacturers, retailers, component suppliers.

Key Activities: Manufacturing and distributing bicycle accessories and parts.

Value Proposition: High-quality accessories and parts for bicycles.

Customer Segments: Bicycle retailers, independent bike shops, individual cyclists.

Customer Relationships: Wholesale partnerships, after-sales support.

Channels: Direct sales to retailers, online marketplaces, trade shows.

Revenue Streams: Accessories and parts sales, wholesale partnerships.

Key Resources: Manufacturing facilities, components sourcing, distribution network.

Cost Structure: Production costs, sourcing costs, marketing expenses.

8. Bicycle Export to Developing Countries:

Key Partners: Importers, distributors, local authorities in target countries.

Key Activities: Manufacturing, packaging, and exporting bicycles.

Value Proposition: Affordable and reliable bicycles for developing markets.

Customer Segments: Importers in developing countries, NGOs, humanitarian organizations.

Customer Relationships: Importer partnerships, after-sales support.

Channels: Export partnerships, trade agreements, international logistics.

Revenue Streams: Bicycle export sales, spare parts sales.

Key Resources: Manufacturing facilities, export capabilities, distribution network.

Cost Structure: Production costs, export logistics, marketing expenses.

9. Bicycle Brand Licensing:

Key Partners: Bicycle manufacturers, licensing agencies.

Key Activities: Licensing a well-known bicycle brand and manufacturing authorized models.

Value Proposition: Access to an established brand and its customer base.

Customer Segments: Bicycle retailers, brand enthusiasts, collectors.

Customer Relationships: Brand loyalty, after-sales support.

Channels: Bicycle retailers, authorized dealerships, online sales.

Revenue Streams: Bicycle sales, licensing fees, authorized merchandise.

Key Resources: Manufacturing facilities, brand licensing agreements.

Cost Structure: Production costs, licensing fees, marketing expenses.

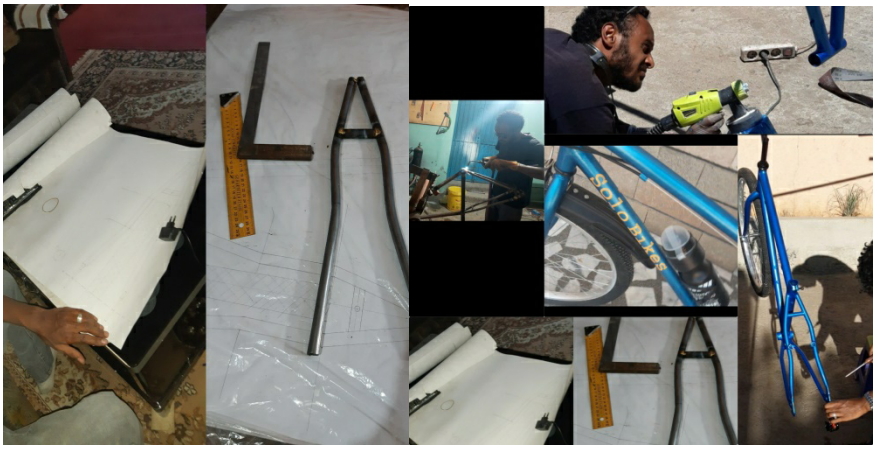
These are just a few business model opportunities for my bicycle manufacturing and assembly project. Each model can be adapted and customized based on the specific market conditions, target audience, and competitive landscape.

fig2.1

fig2.2

fig2.3

fig2.4



2.2. THE PROJECT CONCEPT AND PROFILE

The goal of the project as the researcher mentioned previously is to manufacture different designs of bicycles so as to deliver best quality bicycles with lower price. Currently the demand for bicycle is getting high and high. Because even the government is trying to create awareness of how bicycles are good for health and also reduces transportation problem for the people. The government also is trying to infrastructure roads for riding bikes and different parks. The stakeholders of this project are bicycle part importers, welding accessory importers, Ethiopian road and transportation

authority, wholesalers and retailers, athletes, young peoples, peoples who have health problems. And they benefit from them as their responsibilities to the production part.

2.3. PRELIMINARY STUDY

There are different costs to start up the manufacturing process. Such as raw material for frame cost, labor cost/administrative cost, parts/ accessories cost, workshop/warehouse cost, machine cost, utility cost. We can get revenue by asset sale for private customers, wholesalers and retailers. And other source of income will be by renting the bicycle into recreational centers like parks. The project needs approximately 1million birr to start in a full capacity and definitely returns the money in one year since there is highly demand. As we are manufacturing 1 or 2 bicycle in a week currently with only one design which is 26 inch we can see the demand how people eager to have it with the same quality with the imported one and lower price.

Market Analysis:

To evaluate the current demand for bicycles in Ethiopia across different customer segments, such as commuters, students, and recreational cyclists, Identify the key competitors in the market and analyze their market share, pricing strategies, and product offerings. Conduct a survey or market research to understand customer preferences, needs, and willingness to pay for bicycles.

Location Analysis:

To identify potential locations for the manufacturing and assembly facility, considering factors such as proximity to raw materials, transportation infrastructure, and availability of skilled labor, Evaluate the costs associated with land acquisition, infrastructure development, and utilities in different potential locations, Consider the ease of doing business, government incentives, and regulations specific to the manufacturing sector in each location.

Supply Chain Analysis:

Identify the required raw materials, components, and parts for bicycle production and assembly, Analyze the availability and cost of these materials in the local market and explore potential suppliers, Assess the feasibility of sourcing materials locally or internationally and evaluate the associated costs and logistics.

Technology and Machinery:

Determine the required machinery, equipment, and technology for bicycle production and assembly, Evaluate the availability of such machinery and technology in Ethiopia and the associated costs, Consider the need for technology transfer or partnerships with international manufacturers to acquire advanced manufacturing capabilities.

Labor Force:

Assess the availability of skilled and semi-skilled labor in Ethiopia for bicycle manufacturing and assembly, Analyze the labor market conditions, wage rates, and potential training requirements for the workforce, Determine the labor cost and productivity levels to estimate the overall human resource expenses.

Financial Analysis:

Develop a comprehensive financial model to assess the financial viability of the project, Estimate the initial investment required for land, building, machinery, and equipment, Forecast the operational costs, including raw materials, labor, utilities, and maintenance. Project the revenue potential based on market demand, pricing strategies, and production capacity,Conduct sensitivity analysis to assess the project's resilience to different market scenarios and risks.

Risk Assessment:

Identify and analyze potential risks associated with the manufacturing and assembly of bicycles in Ethiopia, Evaluate risks related to market competition, changes in customer preferences, supply chain disruptions, and regulatory challenges, Develop risk mitigation strategies to reduce the impact of identified risks on the project's success.

Regulatory and Legal Considerations:

Understand the legal and regulatory requirements for establishing and operating a bicycle manufacturing facility in Ethiopia, Identify any permits, licenses, or certifications required for manufacturing and assembly operations, Comply with environmental regulations, labor laws, and safety standards applicable to the industry.

Sustainability and Social Impact:

Assess the potential social and environmental impact of bicycle manufacturing and assembly operations in Ethiopia, Consider initiatives such as employing sustainable manufacturing practices, promoting local employment, and supporting community development.

This preliminary study will provide a foundation for further in-depth analysis and decision-making regarding the feasibility and viability of establishing a bicycle manufacturing and assembly facility in Ethiopia. It will help identify the opportunities, challenges, and key considerations associated with the project.

CHAPTER 3: PROJECT METHOD AND PROCEDURE

3.1. PROJECT DESIGN

Project design is a process of outlining all of a projects stages and creating a project plan. this will include project overview(a brief summary of the project) , product feasibility(determine the required size and layout of the production facility based on production capacity and workflow) ,supply chain management (identify and establish relationship with reliable supplies fo raw materials, components and parts required for bicycle manufacturing and assembly), Production Processes(Define the manufacturing and assembly processes for bicycles, considering factors such as efficiency, quality control, and product customization), Technology and Machinery (Assess the technology and machinery required for efficient bicycle manufacturing and assembly) ,Quality Control and Assurance (Establish quality control measures at different stages of production to ensure the bicycles meet the required standards), Human Resources (Determine the required workforce size and skill sets for various roles, including production operators, technicians, supervisors, and quality control personnel), Marketing and Sales (Develop a marketing strategy to promote the manufactured bicycles to the target market),Environmental and Social Responsibility (Implement sustainable manufacturing practices, such as waste management, energy efficiency, and resource conservation), and Project Timeline and Budget (Create a detailed timeline with milestones and deliverables for each phase of the project)

3.2. TYPES OF DATA

For the project of bicycle manufacturing and assembly, various types of data are needed to inform decision-making, monitor progress, and optimize operations. Here are some key types of data that are relevant to this project and the researcher used.

Market Data:

Demographic data: Population size, age distribution, income levels, etc. Market trends and consumer preferences: Data on customer preferences, buying patterns, and trends in the bicycle market. Competitor analysis: Information on competitors' market share, pricing strategies, product offerings, and customer feedback.

Production Data:

Raw material data: Information on the availability, quality, and cost of raw materials required for bicycle manufacturing. Production capacity: Data on the facility's production capacity, including the number of units produced per day, shift, or month. Workforce data: Data on the number of employees, their skills, productivity levels, and labor costs.

Machinery and equipment data:

Details on the machinery, equipment, and technology used in the production processes.

Quality Control Data:

Inspection data: Data on the quality control checks performed at different stages of production, including measurements, tests, and visual inspections. Defect rates: Information on the number of defective units identified during production or customer returns. Customer feedback: Data on customer complaints, suggestions, and reviews related to product quality.

Supply Chain Data:

Supplier data: Information on suppliers, including contact details, lead times, delivery performance, and pricing. Inventory data: Data on inventory levels, stock replenishment rates, and stock outs to ensure smooth production flow.

Logistics data:

Data on transportation costs, delivery times, and efficiency of the supply chain.

Sales and Marketing Data:

Sales data: Information on the number of bicycles sold, revenue generated, and sales performance by product, region, or customer segment. Marketing data: Data on marketing campaigns, customer acquisition costs, customer conversion rates, and customer feedback.

Pricing data:

Data on pricing strategies, discounts, promotions, and price elasticity analysis.

Financial Data:

Cost data: Information on production costs, including raw materials, labor, overheads, and maintenance. Revenue data: Data on sales revenue, average selling price, and revenue by product category or customer segment. Profitability data: Information on profit margins, return on investment, and other financial metrics. Budget data: Data on planned versus actual expenses, budget variances, and cash flow projections.

Environmental and Social Impact Data:

Environmental data: Data on energy consumption, waste generation, greenhouse gas emissions, and water usage. Social impact data: Information on employment generation, training programs, community development initiatives, and stakeholder engagement.

3.3. SOURCES OF DATA

The data can be collected through surveys, market research, production records, quality control checks, sales reports, financial statements, and other relevant sources.

3.4. DATA COLLECTION METHODS AND TOOLS

the data will be collecting through interviewing

3.5. DATA ANALYSIS METHODS AND TOOLS

The data will be analyzed using figures and tables.

3.6. SCHEDULE

I will finish the final project with the school time frame schedule.

3.7. RESOURCE BUDGET

Since it is online there won't be a lot of cost so I may take 3000 ETB from my own pocket. the costs will be internet data, transportation cost for market analysis and print out costs for the papers

3.8. LIMITATION OF THE PROJECT

The availability of skilled labor with expertise in bicycle production may be limited. The second one is securing adequate funding and access to capital for setting up and

expanding bicycle production facilities can be challenging.

CHAPTER 4: PROJECT PREPARATION

4.1. MARKETS AND DEMAND ANALYSIS

The need for having bicycle in Ethiopia is very high as we ask different shops available in Addis Ababa and from personal customers who saw the product in the social media market. This year in Ethiopia 56, 000 bicycles were imported as per the information we got from customs and revenue commission. in our county there is no one manufacturing company that manufacture bicycles. the target market for the use of bicycles are combustion engine car engines, peoples who are in need of transportation , retailers of bicycles , peoples who have health issue, peoples who give delivery services, students and etc. competitors might be wholesalers , and bicycles importers. Producing bicycles in Ethiopia will satisfy the demand because it will be delivered with the cheap price , saves foreign currency, creates jobs opportunity, and so on. The distribution channel will be in Addis Ababa by giving to retailers and wholesalers and to the countryside of Ethiopia we deliver through wholesalers ho are found there. 80% raw materials for producing bicycles are available I Ethiopia and the remaining 20% will be imported.

4.2 LOCATION AND SITE ASSESEMENT

Addis Ababa is very convenient for production of bicycles. Because all materials are available around “mercato” except from the imported ones. Manufacturing in Addis Ababa is helpful for shipping purpose to countryside and availability of work force like skilled labors, welders, assemblers, technicians. Power availability is also good in Addis Ababa. Addis Ababa government gives incentive by tax breaks and access o special economic zones.

4.3. ORGANIZATIONAL AND HUMAN RESORCE

There will be administrative and labor cost. There will be managerial staff and laborers like welders , assemblers etc.

4.4. SOCIAL ANALYSIS

Transportation and Accessibility: Bicycles can serve as an affordable and environmentally friendly mode of transportation, especially in areas with limited infrastructure. Increased production and availability of bicycles can contribute to improved mobility and accessibility, particularly in rural or less-developed regions of Ethiopia.

Health and Well-being: Bicycles promote physical activity and have positive impacts on public health. The production of bicycles can encourage people to engage in regular exercise, leading to improved fitness levels and overall well-being.

Job Creation: The production of bicycles can stimulate local economies by creating employment opportunities. It can involve various stages, including manufacturing, assembly, distribution, and sales, which can generate jobs across different sectors.

Skill Development: The production of bicycles requires a skilled workforce. Training individuals in bicycle manufacturing and assembly can enhance their technical skills and provide them with valuable employment prospects.

Local Industry and Innovation: Increasing local production of bicycles can reduce reliance on imports and contribute to the growth of the domestic industry. It may also foster technological advancements and innovation in bicycle manufacturing processes.

Environmental Impact: Bicycles are environmentally friendly as they do not emit carbon dioxide or contribute to air pollution. By promoting bicycle production, Ethiopia can further its efforts towards sustainable development and reduce carbon footprints.

4.5. ECONOMIC ANALYSIS

Employment and Income Generation: The production of bicycles can contribute to employment creation and income generation. It involves various stages, including raw material sourcing, manufacturing, assembly, distribution, and retail. Each stage can provide job opportunities, both directly and indirectly, thus stimulating economic activity and improving livelihoods.

Local Industry Development: By focusing on domestic bicycle production, Ethiopia can develop its own industry and reduce reliance on imports. This can lead to the growth and development of local manufacturing capabilities, including the establishment of bicycle assembly plants, spare parts production, and related support services. A strong local industry can contribute to economic resilience and reduce dependence on foreign suppliers.

Export Potential: Ethiopia has the potential to tap into the global bicycle market by producing bicycles for export. With competitive pricing, quality production, and access to international markets, Ethiopia can increase its export revenue and contribute to a favorable trade balance.

Technological Transfer and Innovation: Engaging in bicycle production can facilitate technology transfer and innovation. Collaborations with international partners or the adoption of advanced manufacturing techniques can enhance the technological capabilities of local manufacturers, leading to improved productivity and competitiveness.

Infrastructure Development: The growth of the bicycle production industry in Ethiopia may necessitate the development of supporting infrastructure, such as transportation networks, logistics hubs, and industrial parks. These infrastructure investments can have positive spillover effects on other sectors, contributing to overall economic development.

Value Chain Integration: Bicycle production involves a wide range of components and raw materials. Encouraging local sourcing of materials and components can integrate the bicycle industry into the broader value chain, creating linkages with other sectors such as steel production, rubber manufacturing, and textile industries.

4.6. FINANCIAL ANALYSIS

4.6.1 INITIAL INVESEMENT COST

INVESTMENT	QUANTITY	COST	TOTAL
Arc welding machine	5	40000	200000
Compressor	3	60000	180000
Painting mask and safety equipment		80000	80000
Sanding belt	4	25000	100000

portable			
Tig welding	4	40000	160000
Fixture	4	20000	80000
Angle grinder	7	23000	161000
Drill press	2	50000	100000
Work shop fluorescent light	20	2000	40000
Stock	200	7560	1512000
Total			2613000

Table 4.1

4.6.2 OPREATIONAL COST

Cost analysis	Amount
No products per month	200
Selling price per bike	18000
Sales per month	3600000
Fixed cost per month	237500
Variable cost per bike	7560
Cost per month	1749500
BEP	22.7 (23)
Gross profit per year	22206000

Table 4.2

Fixed cost	Quantity	Cost	Total
Administrative labor cost	22	7welders*10000 2 designers*12000 2 painter*10000 3 Assembler*6000 2Production and marketing officers *15000 2 finance and purchasing officer*10000 1General manager*20000 2 security guard*3000 1 cleaner*2500	2526000
Ware house rent		15000	180000
Marketing cost		12000	144000
Total			2850000

Table 4.3

- To fully begin my business in an organized way I need an investment of 2850500 including different machines & accessories costs 1101000, 200bikes stocks of raw materials costs 1512000 and one month fixed cost of 237500
- production in a day is 10 bikes, so 10*20 days in month 200 bikes
- The gross profit per month is 3600000-1749500= 1850500
- the gross profit margin per month will be (3600000-1749500)/3600000*100= 51.4%
- ROI will be (1850500/2850500)*100 =65%
- producing 23 bikes per month is the BEP

CHAPTER 5: CONCLUSION AND RECOMMENDATION

5.1. CONCLUSION

In conclusion the production of bicycles in Ethiopia holds both potential opportunities and challenges.

The opportunities are:

- bicycles promote physical activity and can contribute to improved fitness levels and overall well- being
- bicycles offer an affordable and environmentally friendly mode of transportation, particularly in areas with limited infrastructures
- bicycle production can stimulate local economies by generating employment opportunities across various stages of the production process
- focusing on domestic bicycle production reduces reliance on imports and fosters the growth of the domestic industry
- Ethiopia can tap into the global bicycle market by producing bicycles for export, contributing to export revenue.
- engaging in bicycle production can foster innovation within the local manufacturing sector

The challenges are:

- adequate infrastructure, including transportation networks and logistics hubs, may need to be developed to support the starting bicycle production industry
- assessing the financial viability including financing is a challenge
- efficient supply chain management including sourcing raw materials is essential for uninterrupted production
- understanding and leveraging government policies and regulations related to bicycles might be the challenge

5.2. RECOMMENDATION

- Government to prioritize sustainable and environmentally friendly manufacturing practices. This recommendation stems from the increasing global focus on sustainability and the growing demand for bicycle products.

- To explore opportunities to source and utilize sustainable materials in bicycle production. This can include using recycled materials, sustainable wood, or biodegradable components wherever possible.
- Promote cycling as a sustainable transportation alternative: Collaborate with government entities and non-profit organizations to raise awareness about the environmental benefits of cycling and promote it as an eco-friendly transportation option. This can include sponsoring cycling events, supporting infrastructure development, and advocating for bicycle-friendly policies.
- By embracing sustainable practices, the Ethiopian bicycle production industry can not only meet the growing demand for environmentally friendly products but also contribute to the country's sustainable development goals and global efforts to combat climate change.