

**AMERICAN COLLEGE OF TECHNOLOGY
DEPARTMENT OF BUSINESS STUDIES
MASTER OF BUSINESS ADMINISTRATION PROGRAM**



**Feasibility Study on Paper Cup Producing and Distributing Factory in
Addis Ababa Ethiopia**

**A Project Report 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

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OMBA-150-21A

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DEC, 2023

Addis Ababa, Ethiopia

Appendix 3: Declaration

I, Hileni Wegayehu, hereby declare that a project work entitled feasibility study on paper cup producing and distributing in Addis Ababa Ethiopia 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 G.C academic year under the supervision and guidance of Asmamaw Mengiste, PhD, 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: 08/12/2023

hileni

Signature of candidate :_

Appendix 4: Certificate

This is to certify that the project work entitled _____ 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 _____ during the period _____ 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 Asmamaw Mengiste, PhD

Signature: _____

Appendix 5: Approval Sheet

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Feasibility Study on Paper Cup Producing and Distributing Factory in**

Addis Ababa Ethiopia

BY: HILENI WEGAYEHU BELIHU

Id Number: OMBA-150-21A

Approved by:

Advisor

Asmamaw Mengiste, PhD _____	_____	_____
Name	Signature	Date

Internal Examiner		
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Name	Signature	Date

External Examiner		
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Name	Signature	Date

Appendix 6: Acknowledgment

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

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Name:Hileni Wegayehu_

Signature:hileni

Date08/12/2023

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CHAPTER ONE: INTRODUCTION

1.0 BACK GROUND OF THE STUDY

A paper cup is a disposable cup made out of paper and after wrinkled with plastic or wax avert liquid from leakage out or soaking by paper. Paper cups are made from renewable resources. The cups should be made from food grade paper which is hygienic in nature. It is talented for holding both hot & cold liquid for longer time. The uses of paper cups have wide range. Give the quick changes in life style; it is the right time to enter the customer segment to popularize the home consumption of paper cups.

There are several inherent advantages in using Paper Cups as compared to cups of other materials. These Paper Cups are gaining popularity all across the globe as a beautiful and stylish way of minimizing exposure to food borne infections.

Paper Cups have several advantages like; they are manufactured in a very simple process using Food Grade Raw Materials with minimum waste and are easiest to recycle. They are ideal for individual servings at all kinds of parties, functions, picnic occasions, marriages, chat, tea & food joints, etc. Non- toxic in nature, the shapes and surface designs on these paper cups are attractive and present an inviting look. These paper cups can also be custom printed with an outlet's logo, brand punch line or advertising message.

This paper cups are being used of drinking Tea and Cool Drinks. The paper cup finds extensive use in Railways, Functions, Festivals, Hotels, Meetings, household appliances, and domestic applications. Our product ranges from 50 ml to 250 ml, this cup manufacturing unit will be set-up as a small-scale unit.

Now our people and government have the awareness to control the pollution and all are engaged to use the eco-friendly products. Each plastic cup can take 50-80 years to decompose and that are ruin-

ing the nature as well human lifetime. As there is a good production of instead of plastic cups, weight less as well as easy to carry all sellers, mainly no environment pollution, rise the demand of paper cups, user customer are to be encouraged in the modern days.



1.2. OBJECTIVES OF THE PROJECT

General Objective

The general objective of the study is to assess feasibility of a paper cup producing and distributing factory based in Addis Ababa Ethiopia. (This business concept has been adequately described in chapter two)

Specific Objectives

The specific objectives of the feasibility study are:

- ✓ To assess if the business concept (that has been adequately described in chapter two) 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 administratively and managerially 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

Currently, in manufacturing paper cup production has Gap between Demand and supply in our country ,money peoples to use cold and hot drinks go far from their office or work place and waiting to use until gets their order this indicate that such kind of things consume their time and money .but if hot and cold drink supply use takeaway paper cups or paper cups it is easily accessible and preferable for

their customers .and also for the customers minimize more consumption of their time and money by moving from work place and waiting an order.

: -This project ,in general will insight to use of disposable paper cup production in different size in terms of hot and cold drinks addressed in different coffee shops, tea shops ,ice-cream shops ,yoghurt shops ,party organizers ,bars ,fast food restaurant ...etc.

1.4 SIGNIFICANCE OF THE STUDY

The envisaged project deemed to contribute to the economic development of nation in general and the region in specific.

A. Eco friendly

The major benefit of using paper cups is that these are eco-friendly. Basically these are made up of disposable materials and thus do not cause any harm to the environment.

B. Safe and Hygienic

Needless to mention, that these paper cups are extremely safe and hygienic to use .these cups are used for a one time purpose and thus prevent

Infections. They are disposable and thus decrease the chance of catching infections. Manufactured by using paper cup making machine, these are ideal for consuming all kind of beverages, be it hot or cold.

C. Light in weight

Using paper cup is that they are light in weight .it can be carried around with much ease and comfort

D. Source of Revenue

As public policy of any nation, the government collects different forms of taxes from different business organizations and individuals. Among the different forms of taxes, business income taxes and payroll taxes are collected from undertaking business activities. Therefore, The factory will serve as source of revenue for both the region and nation in general.

E. Employment Opportunity

One of the problems that our country faced is Unemployment .Therefore, the current objective of the government is working on tackling the problem of

Unemployment and fostering the development process either through creating self-employment in other organization .hence this factory will hire around 10 persons.

And also may replace imported goods.

F. Save country foreign exchange

By producing paper cups products locally, the project will help to reduce the nation's foreign exchange cost to import these products. Besides to import this products

1.5 ORGANIZATION OF THE PROJECT

The paper consists five chapters. The first chapters deals with the introduction part that consist Back ground of the project, Statement of the problem, objective of the project, significance of the project, scope of the project and limitation of the project .chapter 2 deals with project concept it contains opportunity study, the project concept and profile and also

Preliminary study. The project Methods and procedure presented in chapter 3.In chapter four project preparations is discussed. Finally, the last chapter is deals with the summery of findings, conclusion and recommendation that that is forwarded by the respondent and by projector based on the result obtained.

1.6. LIMITATION OF THE PROJECT

Time constraint were the problem that would be encountered in this study .

CHAPTER TWO

PROJECT CONCEPT

2.0. INTRODUCTION

This chapter tried to cover the Opportunity study, the project Concept and Profile and Preliminary study. The Opportunity study will highlight the opportunities available in a particular economy, area, or a particular market, based on estimates and analyzes. The project Concept *Describe and justify the purpose of a project* and also indicate the positive/negative *impacts of the project*, assess political *support to the project* and indicate project *risks* and indicate chances of achieving objectives .Profile and Preliminary study Briefly describe structure and objectives of a project, nature, and size of demand, need to be satisfied, foreseen beneficiaries, availability of the most important inputs, approximate Investment & operational cost, expected revenues & other benefits, rough estimates of financial and economic returns, Major factors that affect the project, further information to be acquired through special study/survey

2.1 OPPORTUNITY STUDY

2.1.1. Marketing study for paper cup production in Ethiopia and world?

The global paper cups market size was valued at USD 11 Billion in 2022 and expected to reach USD 17 Billion by 2032 poised to grow at a noteworthy compound annual growth rate (CAGR) of 4.5% from 2023 to 2032 (<https://www.precedenceresearch.com>). Ethiopia is one of the developing countries of Africa

and urban population is increase time to time ,increase industry sector ,increase population growth time to time ,road crowded, in the future specially urban area working time is also extend ,so due to the above reason and others demand for paper cup product is high to use in social gathering ,coffee tea shop, yogurt shop, ice cream shops ,birthday and different party events preferable to use paper cup production because of compensate other plastic and glass products, they can be recycled ,eco friendly ,saving time ,the purchase price is low, convenient and easy to take and use .so it is suitable for consumers of all consumption level and is not limited by place.

2.1.2 Marketing Strategy and promotion

The company will follow the following promotional methods

- ❖ Website Development
- ❖ Advertising (media ,flyer and newspaper)
- ❖ Public relations
- ❖ Branding

The market strategy mainly focuses on the satisfying the needs, order and the requirement of the customers.

2.2 THE PROJECT CONCEPT AND PROFILE

2.2.1 Purpose of the project Manufacturing Paper Cups is the purpose of satisfying needs and wants of Consumers is the market place. Developing a strategy for delivering an effective combination of food grade quality and cost-effective features for consumers within the target market.

The prospects of paper cups depend on the value of customers who utilize it. But in our country paper cups will be use by most of the people as it is easy to use, hygienic and eco-friendly.

As paper cups are a product of daily consumption and necessity, their marketing not be a problem as the consumers aware of the advantages of using the paper cups. The raw materials are indigenously available and the manufacturing process will be simple.

2.2.2 Business Model Canvas: paper cups

CUSTOMER SEGMENT:

There are four key types of customer segmentation that you should be aware of, which include demographic, geographic, psychographic, and behavioral segmentations.

VALUE PROPOSITION:

- Loyal customers' discounts (key partners). Points system which leads to free some cups
- Being an affordable, efficient and sustainable business. (reusing recyclable)

CHANNELS:

- Through our key partners (Cafe's that are partnered with Goody)
- Technology (Our web-site)

CUSTOMER RELATIONSHIPS:

- Customers that are loyal to our key partners
- Close customer relationship (web-site, email, Facebook, Twitter)
- Earning customers trust, loyalty & respect
- Putting customers concerns first

KEY RESOURCES:

- Production of cups
- Distribution networks (to distribute to customers ordering online)
- Loyal customers (to Goody)
- Promoting our product
- Discounts

REVENUE STREAM:

- Asset Sales: When customers purchase our product

KEY ACTIVITIES:

- **Loyal relationship with our key partners**
- Adapting to changes
- Process of producing the product (reliable)
- Improving or updating designs

KEY PARTNERS:

- Our partner is Goody Card.

COST STRUCTURE:

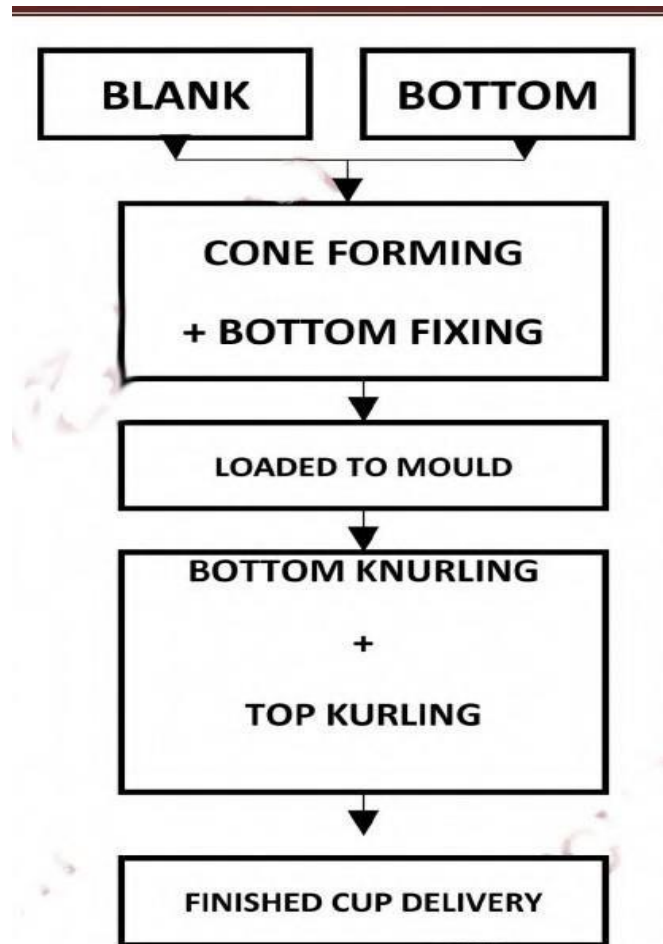
- Production
- Registration (company) Fees
- Purchasing costs (raw materials)
- Designing new cup
- Marketing (Advertising)
- Legal fees for IP copyrights
- Distribution networks

2.2.3 Manufacturing Process

The general structure of paper cup manufacturing is composed of three stages. They are:

1. The First stage: mainly finishes transmission of the paper cup's side wallpaper, shaping side wall and transferring them to the second stage after shaped.
2. The Second stage: transmission of the cup-bottom paper, shaping cup-bottom, joining the shaped side wall and cup bottom, automatic transmission and discharging of the shaped cup and curling the shaped cup's edge.

3. The third stage: mainly includes 45 degree angles separating, preheating, curling bottom, curling rim and so on mechanisms, which are the important parts in finishing paper cup.



2.3. PRELIMINARY STUDY

2.1.1. Product Nature and characteristics

A paper cup is a disposable made out of paper and after lined with plastic or wax prevent liquid from leakage out or soaking by paper. Paper cups are made from renewable resources. The cups should be made from food grade paper which is hygienic in nature. It is capable for holding both hot & cold liquid for longer time. The uses of paper cups have wide range. Give the rapid changes in life style; it is the right time to enter the consumer segment to popularize the home consumption of paper cups.

There are several inherent advantages in using Paper Cups as compared to cups of other materials. These Paper Cups are gaining popularity all across the globe as a beautiful and stylish way of minimizing exposure to food borne infections.

Paper Cups have numerous advantages like; they are manufactured in a very simple process using Food Grade Raw Materials with least waste and are easiest to recycle. They are ideal for individual servings at all kinds of parties, functions, picnic occasions, marriages, discussion, tea & food joints, etc. Non-toxic in nature, the shapes and surface designs on these paper cups are attractive and present an inviting look. These paper cups can also be custom printed with an outlet's logo, brand punch line or advertising message.

The Characteristics of Paper Cups?

- ① Light weight and anti-breakage. Compared with glass bottle cups, paper cups are lighter and have no risk of damage.
- ② The cost is low; the light quality can save the circulation cost.
- ③ Good appearance effect; easy to realize printing and decoration, good publicity effect, and promotion.
- ④ It can be combined with a variety of materials to improve the protection function. It is compounded with aluminum foil, plastic, and other materials to prevent deterioration of the contents.
- ⑤ Good shading performance can better maintain the color, fragrance, and taste of the contents.
- ⑥ It can be operated with packaging machinery to achieve high-quality and high-speed production and packaging.
- ⑦ Easy to open and seal, easy to open, and easy to restore.
- ⑧ Easy to handle waste and easy to recycle, which can save resources.
- ⑨ The emergence of new technologies and new processes has continuously improved the manufacturing technology of paper cups, and new types of paper cups will appear and will greatly promote and promote the variety of products.

2.3.2 Raw material and input (YOU CANNOT KNOW how much is needed and those kinds of details until the final study is conducted)

Raw material in the form of printed PE paper, bottom reel and packing material would be required for the paper cup business. The total investment in raw material per month would be about ETB75,000

2.3.3 Machinery and Equipment

Automatic machinery for paper cup manufacturing can be purchased from various vendors in India. The cost for automatic paper cut manufacturing machine is USD 1000-USD7000 That means price of automated machine is ETB55,000-385000

XL-ZB09 type automatic paper cup machine is a multi-station automatic molding machine, the automatic paper feeding, sealing (bonded glass), oil filling, filling, bottom heating, knurling, crimping and continuous process of photoelectric detection and fault alarm, counting function, is the ideal equipment for tasting drink cup, tea cup, coffee cup, advertising cup, ice cream cups or other food containers for the production of paper cone



CHAPTER 3

PROJECT METHODS AND PROCEDURE

3.1 PROJECT DESIGNS

The project designs was the waterfall methodology. Because waterfall method supports different manufacturing and production phases and maximize efficiency. And also waterfall approach stags are requirement and planning, design, Implementation ,verification and testing and also the final one is maintenance is clearly describe the production and distribution of paper cups .In requirement and planning phase the student projector identify what the project accomplish, In design solid files and documentation all decisions and develop solution that can be solve project requirement ,In implementation phase of this project process execute our project plan and design in order to produce the paper cups.,

In verification and testing verifies in implementation phase deliver all of the project requirement and finally in maintenance this phase involve minor modification to improve the product developed during implementation. Therefore, waterfall method/linear is help to describe properly the production and distribution of paper cups factory. Qualitative and quantitative approaches also used.

3.2 TYPES OF DATA

For this study, the student projector has used both primary and secondary source of data. Primary data (first-hand

information) are opinions of customer under the disposable paper cup through questionnaire and interview. In addition to the first-hand information gathers through the above methods; the student projector also used different secondary data to strengthen the project.

3.3. SOURCES OF DATA

Primary source of data

The project will be mainly based on first-hand information gather through different data collection techniques. To this end, in-depth interview and observation will be used because to gather appropriate and more reliable data for the study.

Secondary source of data

In addition to the first-hand information gathered through the above methods, the student projector also used different secondary data to strengthen the project. In this regard, different documents will be check in concerning paper cup production. Besides, both published and unpublished materials in the study used where ever it is necessary. Relevant books, Journal articles, bulletins and electronic media i.e. Internet also used to consult previous project findings and existing literature on the topic of the project.

3.4 DATA COLLECTION METHODS AND ACCURACY OF DATA

The method used to collect data primary data in this study was questioner and interview.

Questioner is designed to both close ended and open-ended questions and interview is

designed as structured the reason for in cooperating both close and open ended question is to capture the data by giving clues and giving chance what they perceive about a given question ,respectively on the other hand the reason to use structured interview ,it helpful to find out the truth and facts based on interviewee's response. Secondary data was being collected from published and unpublished materials.

Generally, most of the people are not interested to give time to answer a questionnaire. So it was Very difficult to collect actual data because the information of the respondents will collected by Approaching them to answer the question. To overcome this problem, all possible efforts was Made by the projector himself to ensure the collection of reasonably accurate information from the respondents. So, it has not been possible to apply any other method of investigation. Survey method has the advantage that it facilitates quick investigation and involves higher cost. In order to collect relevant information before taking interview, the whole academic purpose of the study was clearly explained and made clear to the respondents. The Projector himself collected the relevant data from the respondents through face to face interview. Data collected were checked and verified in the field for accuracy and consistency.

3.5 TARGET POPULATION OF THE STUDY

The target population of this project was in different coffee shops, tea shops ,ice-cream shops ,yoghurt shops ,party organizers ,bars ,fast food restaurant which is located in Addis Ababa City . The total number of population is 40 employees and customers of the above listed organization and the student projector assume the total population as a study participant.

Sampling Size and Selection Techniques

Census sampling techniques will apply in this project. Because the total number of targeted population are few. Therefore, all population are to be count since the student projector will be the capacity of getting enough information about paper cup and data will be easily analyzed.

3.6. DATA ANALYSIS AND PRESENTATIONS

In this study, the data will be analyzed through Waterfall analysis *Waterfall analysis* is a great tool for viewing detailed information about the various resources. And presented by such as chart, analysis which includes Profitability, net present value, internal rate of return, benefit cost ratio, payback period and accounting rate of return. The data collected is evaluated and interpreted in lights of the objective and problems and finally it presented the findings in the form of table and explanation. .

CHAPTER 4

PROJECT PREPARATION

This chapter of the project is the most prominent and important part of the study because analysis and presentation is conducted .significant and basic topic of the study assessed as well .the necessary information gathered from respondents through questionnaire and interview have been analyzed ,presented and interpreted and also If the project is believed to be viable during identification and pre-feasibility studies, it enters into the feasibility study stage. Feasibility studies are detailed analysis of the project in different dimensions that lead to an investment decision. It provides information required for the project appraisal. It is similar in content with the pre-feasibility study except it is done in detail with greatest accuracy in an iterative optimization process. It usually includes seven major parts: market and demand analysis, raw materials & supplies study, location, site & environment impact assessment, production program & plant capacity, technical analysis, organizational and human resources analysis, financial and economic analysis. Generally, this chapter, introduces the major feasibility study areas.

4.1 Markets and Demand Analysis

The objective of an investment project is benefit from utilization of resources and satisfying the market demand in a society. This market analysis is an important key in determining the magnitude of investment, location, technology requirement, production program, etc. The market analysis (the concept of marketing) is the orientation of management with regard to their business decisions that is market makes all participants in an organization to orient their thinking towards the market. The major objective of market analysis is to determine whether there is a gap between demand and supply, i., is there a market for the product. The key steps involved in market and demand analysis are organized into seven sections as follows. → Situational analysis and specification of objectives → Collection of secondary information → Conducting market survey → Characterization of the market → Demand forecasting → Uncertainties in demand forecasting → Market planning. The key steps in market and demand analysis and their inter-relationships

As the coronavirus disease (COVID-19) crisis takes over the world, we are continuously tracking the changes in the markets, as well as the purchase behaviors of the consumers and our estimates about the latest market trends and forecasts are being done after considering the impact of this pandemic.

Disposable Paper Cup -

Disposable paper cups are widely used across our market; rapid changes in lifestyle are anticipated to push the usage of these paper cups in the household sector

When compared to paper cups made of other material such as plastic, the usage of paper cups hold several inherent advantages, eco-friendliness being one of them.

Extensive use of paper cups in catering and events is likely to drive its demand during the forecast period

Increasing Use of Organic Components in Paper Cups Manufacturing to Create Demand Opportunities

Disposable paper cups manufacturers have been considering the demand for eco-friendly and completely biodegradable disposable paper cups, thus focusing on product innovation and diversification by adopting sustainable manufacturing methods.

The opportunity in the market lies amidst the rising demand for biodegradable paper cups from cafeterias, quick service restaurants, and other catering service providers.

4.1.1 Key Market Segmentation:

4.1.1.1 Breakup by Drinks Type:

- Hot Paper Cups
- Cold Paper Cups

We are planning to target Hot and Cold Paper cups segments due to our premium product specification which can afford all types of drinks.

The Global Paper Cup market is anticipated to rise at a considerable rate during the forecast period, between 2023 and 2030. In 2022, the market is growing at a steady rate and with the rising adoption of strategies by key players, the market is expected to rise over the projected horizon.

Paper cups are cups made out of paper and often lined with plastic or wax to prevent liquid from leaking out or soaking through paper. They can be made by recycled paper. They are the least expensive cups and are widely used around the world. Paper can be recyclable; however, paper cups must be coated with a polyethylene plastic (most common used coating) to prevent damage to the cups from hot beverages.

Market Analysis and Insights: Global Paper Cup Market

Due to the COVID-19 pandemic, the global Paper Cup market size is estimated to be worth USD million in 2022 and is forecast to a readjusted size of USD million by 2028 with a CAGR of Percent during the review period. Fully considering the economic change by this health crisis, Air Pocket Insulated accounting for Percent of the Paper Cup global market in 2021, is projected to value USD million by 2028, growing at a revised Percent CAGR in the post-COVID-19 period. While Tea and Coffee segment is altered to an Percent CAGR throughout this forecast period.

In Europe, Paper Cup key players include Huhtamaki, Dart Container, Seda Group, etc. Europe top three manufacturers hold a share about 30Percent.

In terms of product, Air Pocket Insulated is the largest segment of Cobalt, with a share about 50Percent. And in terms of application, the largest application is Tea and Coffee, followed by Chilled Food and Beverages.

Global Paper Cup Scope and Segment

Paper Cup market is segmented by Type and by Application. Players, stakeholders, and other participants in the global Paper Cup market will be able to gain the upper hand as they use the report as a powerful resource. The segmental analysis focuses on sales, revenue and forecast by Type and by Application for the period 2017-2028.

Growing demand for below applications around the world has had a direct impact on the growth of the Paper Cup

- Tea and Coffee
- Chilled Food and Beverages
- Others

Based on Product Types the Market is categorized into Below types that held the largest Paper Cup market share In 2023.

- Air Pocket Insulated
- Poly-Coated Paper
- Post-Consumer Fiber
- Wax-Coated Paper

The following regions are leading the Paper Cup Market.

- North America (United States, Canada and Mexico)
- Europe (Germany, UK, France, Italy, Russia and Turkey etc.)
- Asia-Pacific (China, Japan, Korea, India, Australia, Indonesia, Thailand, Philippines, Malaysia and Vietnam)
- South America (Brazil, Argentina, Columbia etc.)
- Middle East and Africa (Saudi Arabia, UAE, Egypt, Nigeria and South Africa)

<https://www.precisionreports.co/enquiry/pre-order-enquiry/19984608>

4.2 Raw Materials and Supplies Study (if any)

There is technical relationship between input and output; the amount of input determines the output amount. Conversely, you have determined the product type and capacity. The next step to produce as per the above step is what input to use. The selection of raw material and supplies depends primarily on the technical requirements of the project and the analysis of supply markets. Important determinants for the selection of raw materials and factory supplies are environmental factors such as resource depletion and population concerns, as well as criteria related to project strategies for example, the minimization of supply risks and the cost of materials inputs.

In order to keep the cost of the supply low, key aspects are to be identified and analyzed in terms of requirements availability, cost, and risks which may be significant for the feasibility of a project. The raw materials and supplies study consists of thorough analysis on what type of input? Where to find? How much it costs? Etc

Paper cups are disposable cups made of paper and lined with wax or plastic (PE coated paper, reel and sheet) to prevent the liquid from soaking the paper.

Raw material in the form of printed PE paper, bottom reel and packing material would be required for the paper cup business. The total investment in raw material per month would be about ETB75,000

4.3. Location and site assessment

Location analysis has to identify a location suitable for the industrial project under consideration. The choice of location and site necessitates an assessment of demand, size, and input requirement. Although most often the terms 'location' and 'site' are used synonymously, they should be distinguished. Location refers to a relatively broad area like a city, an industrial zone, or a coastal area; site refers to a specific piece of land where the project would be set up. The locational requirements and conditions that are significant for the selection of both location and site should be judged against the defined corporate strategies and the financial and economic impacts. The feasibility study should also indicate on what grounds alternatives locations have been identified and give reasons for leaving out other locations that were suitable but not selected. Traditional approach to industrial location focused, on the proximity of raw materials and marketing's, mainly with a view to minimizing transport costs. The modern view requires consideration of commercial, technical and financial factors, but also of the social and environment impact a project might have. Generally, the choice of location is influenced by a variety of considerations: proximity to raw materials and markets, availability of infrastructure, labor situation, governmental policies, and other factors.

The student projector planning to set up the factory in shager city, sululta town, which is around 23 kms far from the center (Addis Ababa), which is the way to Gojjam. The main justification behind the selection of this location are

The main reasons to choose this location are;

- Strategically located to the center and largest market of the nation (Addis Ababa)
- Relatively advanced development infrastructure (power, water, telephone, internet, road, etc)
- All road to the nearest market Outlets
- Availability of skilled labor force
- Favorable climate and topography

The rent for the factory is supposed to be birr. 30,000. per month The space required for our setup is 250 sq. ft., the plant will cover 50 sq ft .

In the long run we would like to purchase our land set up our own plant and warehouse within the Sululta or maybe in the Addis Ababa .

4.4 Production Program and Plant Capacity (if any)

Based on Machine of paper cup production capacity and program this automated machine assumed to produce 75 pieces of paper cup to 150 pieces of paper cup paper cups produce per minute assume if 4 working hour per day use to produce the cup at full capacity produce more than 1,080,000.00 cups yearly.

4.5. Technology selection (if any).

Advanced technologies have been used in manufacturing paper cups. However, with new manufacturing paradigms such as the Industrial Internet of Things production systems will be revolutionized. Technologies play a critical role in the capability of enterprises to compete as excellent organizations. Selecting the right technologies can create remarkable competitive advantages such as improved flexibility, quick response to changes in the market, improved quality and productivity, enhanced customer satisfaction, and increased ease of operation. New technologies can also offer opportunities for both product differentiation and new business plans .

Identifying the best technology from a set of possible alternatives is the technology selection problem. The knowledge of solving this problem will assist the organization in making more competitive products and services, more efficient processes, and entirely new solutions. The company will use world standard production technology.

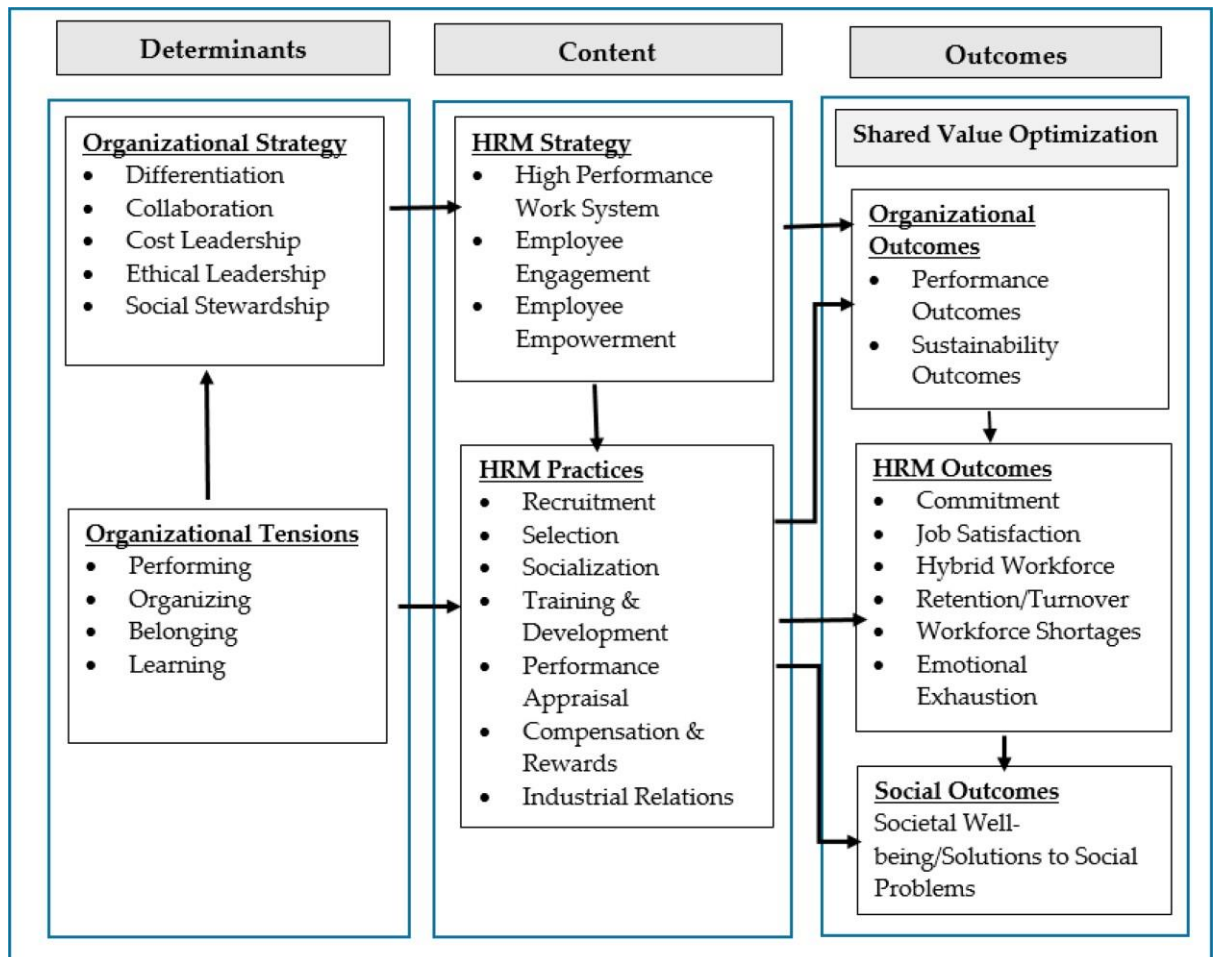
4.6. Organizational and Human Resource

Business and organization depend on three key resource physical resource such as material and equipment; financial resources including cash ,credit and debt and people. There can be no doubt that people play a vital role in an organization or business as a resource.

Having through strategy ,a marketable product or service and efficient processes are all important. But all of this depends on the ability of the people within the organization to excute strategies ,plan,and processes to make a business successful.

Every part of business boils down to people .and by managing people ,organization can be more profitable ,lead more effectively ,create brand loyalty and do better work .to make a business successful.

Generally ,our organization and human resource describe by the following figure.



4.7. Social Analysis

Manufacturing paper cups is the purpose of satisfying needs of consumers in the market place. The paper cups are reckoned to be high potential business for country and present status of this industry will provide ample employment opportunities in our society.

4.8. Economic and environmental Analysis

The technology adopted for making paper cups is ecofriendly .cup forming process is totally automatically done by the machine, only feeding and packaging involves manual work. The scrap papers created out of this manufacturing process also can be sold for recycled paper converters .hence there is no chance of any pollution out of this industry .paper cups are used by all the people as it is no chance of any pollution out of this industry.

Paper cups are used by all the people as it is easy to use, hygienic and eco-friendly.

The environmental damage caused by plastic cups has led varies organizations to encourage the utilization of paper cups due to their eco-friendly nature,which has created positive impact on the global paper cup market, Moreover, on account of increasing awareness about cleanliness and hygiene,consumers consider disposable paper cups to be safer than re usable cups ,as they are exposed to high heat during the manufacturing process which kills bacteria and renders the product practically sterile.

4.8.1. project stakeholders

According to the Project Management Institute, project stakeholders are defined as: “Individuals and organizations who are actively involved in the project, or whose interests may be positively or negatively affected as a result of project execution or successful project completion.”

Internal stakeholders are people or groups within the business, Internal stakeholder of this project such as the projector himself, members, managers, executives, and so on. External stakeholders are as you can probably guess people or groups outside the business. This includes customers, users, suppliers, and so on .

4.8.2. project Beneficiaries Identification

Project beneficiaries are those who will derive some benefit from the implementation of the project. Two types of beneficiaries can be defined: direct and indirect. Direct Beneficiaries: Direct beneficiaries can be defined as those who will participate directly in the project, and thus benefit from its existence that means the projector, workers direct beneficiaries because by producing and distributing the product get profit and wealth. And Indirect beneficiaries refer to other individuals, groups or organizations who are not the direct target of your interventions and activities but may be indirectly affected and benefited by the activities with direct beneficiaries Such as the product user easily used by our product and also government and all people because our product are hygienic and eco-friendly the product is not an impact for air pollution because it is easily disposable

4.8.3. project social cost Analysis

A social cost and benefit analysis helps to compare different alternatives for a project in an integrated manner. This is not just a financial consideration. After all, an SCBA also identifies other, non-financial effects. For example, when it comes to the effects on accessibility, the environment and the economy.

In a twelve-month period, around 52 billion disposable paper coffee cups make their way out of coffee shops and fast food restaurants and into the landfill^[10]. Although the use of paper cups has numerous benefits, the cost of assembling, purchasing and disposing of these cups is costly and requires a huge amount of energy and water^[11]. The main reason behind the increased use of paper cups is the changing lifestyle and consumer preferences to convince. Whether it is America or Canada there is a growing love affair for the disposables. Faster pace lifestyles and increased dependency for on-the-go eating play a significant role in increased consumptions of disposables.

4.8.4. project social benefit Analysis

Disposable paper cups are easily decomposed by microorganisms. Hence they create lesser pollution issues and can be easily buried as compost or can be easily burned causing less pollution compared to disposable plastic cups.

Among the social benefit of paper cups: (they don't necessarily sound like social benefits)

- Easy to carry and handle during trips, travel, etc.
- Moderate prices compared to other alternatives.
- Use for one time only, and the subsequent aspects of hygiene and non-need as with other alternatives such as glass containers and re-washing plastic.
- Preference for use in parties and meetings where large numbers are participants and ease of use.

Generally, They eliminate the need for washing and drying reusable cups, which can save time and water. Additionally, they are often made from renewable materials and are recyclable, which makes them a more environmentally friendly option compared to other types of single-use cups, such as plastic or Styrofoam cups.

4.9. Financial Analysis

Financial analysis is the process of evaluating businesses, projects, budgets, and other finance-related transactions to determine their performance and suitability.

4.9.1. Initial Investment cost

Total Initial investment cost

SN	Description	Cost in birr
1	Machinery and Equipment	239,200.00
2	Office equipment	107,000.00
	Total fixed investment	346,200.00
4	Pre service expense	593,000.00
	Initial working capital	150,000.00
6	Total	1,089,200.00
	Contingency (10%)	108,920.00
	Total initial investment capital	1,198,120.00

A. Machinery **and** Equipment

SN	Description	Cost
1	Automatic Paper cup machine	60,000.00
2	Paper cup packing material	15000.00
3	bottom reel	12000.00
4	PE paper	61,000.00 per ton
5	Generator	50,000.00
6	Other equipment	10,000.00
	Total	208,000.00
	Insurance&transport(15%)	31,200.00
	Grand total	239,200.00

B. Office equipment

SN	Description	Quantity	Cost
1	Managerial table with chair	1 tab&4 chair	10,000.00
2	Secretarial table with chair	1 table&2 chair	5000.000

3	Office table & chair	2 table & 4 chair	10,000.00
4	Computer with printer	2	30,000.00
5	Shelf	1	2000.00
6	Filing cabinet	2	3000.00
7	Telephone set	2	2000.00
8	Carpet and curtain		30,000.00
9	Other miscellaneous office equipment		15,000.00
10	Total		107,000.00

C. pre service expense

SN	Description	Cost in birr
1	Project proposal	5000.00
2	EIA Study/Environmental Impact Assessment Study	7000.00
3	Promotion and Advertisement	50,000.00
4	Licensing and other fee	1000.00
5	Worker capacity training	50,000.00
6	Rent for factory and office	480,000.00
	Total	593,000.00

D. Initial Working capital

The initial working capital is estimated to birr 150,000

4.9.2. Production cost

i) Raw material and input

SN	Description	Unit measurement	Cost in birr
1	PE paper	2Tone	122,000.00
2	Paper cup packing Material	2LS	30000.00
	Total		152,000.00

i) Other operating Expense

SN	Description	Annual cost in birr	Assumption used
1	Property insurance	3,462.00	1% of fixed investment cost
2	Audit and legal fee	36,000.00	3000 per month
3	Uniforms		
4	Telephone, fax and postal	12,000.00	1000per month
5	Cleaning goods supplies	12,000.00	1000per month
6	Repair and maintenance	8,655.00	2.5of fixed investment
7	Advertisement	300,000.00	1%of sales
8	Stationary and other office supplies	12,000.00	1000 per month
9	Electricity	100,000.00	
10	Water	15000.00	
	Miscellaneous expense	60,000.00	
	Total	547,117	

i) Salary and Wage Expense

SN	Description	NO	Monthly Salary in Br.	Annual Salary in Br.
1	General manager	1	15,000.00	180,000.00
2	Accountant	1	8000.00	96000.00
3	Secretary	1	3,000.00	36000.00
4	Marketing of-	1	7000.00	84,000.00

	Ficer			
5	Sales person	2	4000.00	48,000.00
6	Technical labors	2	6000.00	72,000.00
7	Packing and store labors	2	4000.00	48,000.00
8	Security	2	2000.00	24,000.00
	Sub total	12		588,000.00
	Benefit(25%of basic salary)			147,000.00
	Grand Total	12		735,000.00

Depreciation

Machinery and equipment.....5%

Office furniture10%

A. Working capital

Account Receivable30days

Raw material30days

Work in progress.....5 days

Finished product.....30 days

Cash in hand.....5 days

Account payable.....30 days

Source of fund

SN	Description	% share	Amount in Birr
1	Owners share	30	359,436.00
2	Bank Loan	70	838,684.00
	Total	100	1,198,120.00

Loan repayment schedule

Year	Principal pay- ment	Interest (10%)	Total annual payment(I+P)	Remaining Balance
0	-	-	-	838,684.00
1	279,561	83,864.4	363,425.4	559,123.00
2	279,561	55,912.3	335,473.3	279,562
3	279,561	27,956.2	307,517.2	0

Depreciation schedule

SN	Description	Original value in birr	Depreciation rate in%	Depreciation per year
1	Machines and Equipment	239,200.00	5	11,960.00
2	Office Equip-Ment	107,000	10	10,700.00

Based on the price and capacity program of the factory ,the revenue of the factory projected as indicated in the table below;

Table of revenue projection income

Description	Coffee cup	Tea cup	Price in birr	Total quantity	Projected income
Year1	3,000,000.00	3,000,000.00	5	6,000,000.00	30,000,000.00
Year2	5,000,000.00	5,000,000.00	5	10,000,000.00	50,000,000.00
Year 3	10,000,000	10,000,000.00	5	20,000,000.00	100,000,000.00

4.9.3 Projection of cash flow

Cash flow Statement

Year	Year 0	Year 1	Year 2	Year 3
Equity capital	359,436.00	30,000,000.00	50,000,000.00	100,000,000.00
Loan Principle	838,684.00			
Net sale	0			
Total cash in Flow	1,198,120.00	30,000,000.00	50,000,000.00	100,000,000.00
Cash Payment				
Purchase of raw Material	0	76,000.00	114,000.00	152,000.00
Salary Expense	0	477,750.00	624,750.00	735,000.00
Investment	0			
Other operating Cost	0	410,337.75	465,049.45	547,117.00
Loan repay-Ment	0	363,425.4	335,473.3	307,517.2
Tax payment	0			
Total payment	0.00	1,327,513.15	1,539,272.75	1,741,634.2
Total payment Cash surplus/Deficit	1,198,120.00	28,672,486.85	48,460,727.25	98,258,365.8
Cumulative Balance		1,327,517.15	1,539,272.75	1,741,634.2

4.9.5 FINANCIAL EVALUATION

The financial analysis of the envisioned plant is based on the data provided in the preceding sections and following assumption.

Profitability

According to the projected income statement, the project will start profit in the first year of operation. important ratio such as profit to total sales, net profit to equity (Return on equity) and net profit plus interest on total investment (return on total investment) shows an increasetrend during the life time of the project.

4.9.5.1 Payback period

The projected income statement is used to project the payback period. the project initial investment fully covered within 3 years of operation

4.9.5.2. Accounting Rate of return

Accounting rate of return is a simple formula that any business can use to assess the potential profit of an asset. The ARR formula is “**average annual revenue**”/ “**initial investment.**”

ARR= average annual revenue”/ “initial investment.”

Average annual revenue=Total profit over investment/no of years

Average annual revenue=12,000,000/3

ARR=4,000,000

Recruiting expenditure

Recruiting expenditure=Raw material +salary and wage +other expense

Recruiting expenditure=152,000+735,000+547,117=1,434,117

Turnover over

Turnover over per annum=By sale of 6,000,000 cups50ml and 250ml@5birr=birr30,000,000

Profit per annum

Profit per annum=Turn over-cost of production

Estimated cost of one cup is birr 3

Profit per annum=30,000,000-3(6,000,000)

Profit per annum=12,000,000

% of profit on sale

% of profit on sale=profit/annum*100/Turn over

% of profit on sale=12000000*100/30000000

% of profit on sale=0.4%

4.9.5.3. Net present value/NPV

Period	Cash flow	NPV
1	1,327,517.15	$1,327,517.15/(1+0.0064)^1$
2	1,539,276.75	$1,539,276.75/(1+0.0064)^2$
3	1,741,634.2	$1,741,634.2/(1+0.0064)^3$

4.9.5.4 Internal Rate of return/IRR

IRR=FV/PV

4.9.5.5. Break even analysis

Fixed expenditure per annum

Interest loan.....167,732.9

Total depreciation.....22660

40%of salary &wage.....40%735,000=294,000

40%of other total expence&utlitis....40%547,117=218,846.8

Total.....703,239.7

CHAPTER 5: Conclusion and Recommendations

5.1. Summary

A paper cup is a disposable made out of paper and after lined with plastic or wax prevent liquid from leakage out or soaking by paper. Paper cups are made from renewable resources. The cups should be made from food grade paper which is hygienic in nature. It is capable for holding both hot & cold liquid for longer time. The uses of paper cups have wide range. Give the rapid changes in life style; it is the right time to enter the consumer segment to popularize the home consumption of paper cups.

There are several inherent advantages in using Paper Cups as compared to cups of other materials. These Paper Cups are gaining popularity all across the globe as a beautiful and stylish way of minimizing exposure to food borne infections.

Paper Cups have numerous advantages like; they are manufactured in a very simple process using Food Grade Raw Materials with least waste and are easiest to recycle. They are ideal for individual servings at all kinds of parties, functions, picnic occasions, marriages, chat, tea & food joints, etc. Non-toxic in nature, the shapes and surface designs on these paper cups are attractive and present an inviting look. These paper cups can also be custom printed with an outlet's logo, brand punch line or advertising message.

5.2. Conclusion

Disposable paper cups have become a ubiquitous part of our world, widely used for serving coffee, tea, and other hot beverages in the office and on the go. Many companies tend to choose paper hot cups over plastic to help reduce their carbon footprint. They believe that these cups are a sustainable choice because they are made from paper, a renewable resource. However, despite their widespread popularity, this belief is a common misconception. Disposable paper cups are not as environmentally friendly as many people believe. How is this so?

Traditional disposable paper hot cups are not biodegradable because there is usually a petroleum-based plastic lining on the inside of the cup. This lining is necessary to prevent the cup from leaking or becoming soggy, but it also makes the cups non-recyclable and not biodegradable. When paper cups are placed in recycling bins, the plastic lining is not easily separated from the paper, making it difficult for recycling facilities to process them. As a result, most paper cups end up in landfills, where they can take decades to break down.

Source One Eco Friendly offers an alternative solution to the plastic-lined disposable paper cup. Instead, they use a PLA thermoplastic material to coat the inside of their paper-based disposable hot cups, making them 100% biodegradable and compostable! PLA (polylactic acid) is the fastest-growing biodegradable plastic. It is made from renewable, organic sources such as corn starch, tapioca, and sugarcane. It is designed to break down as quickly as paper, making it a more sustainable choice for our planet. Using sustainable organic substances like PLA, rather than petroleum-based plastics, helps to reduce our dependence on fossil fuels.

Source One Eco friendly also offers PLA-based beverage accessories such as cup lids and stirrers, which are traditionally made from plastic. Many companies don't give much thought to where these small accessories go when they are discarded. However, single-use plastic items like lids and stirrers play a significant role in our planet's plastic pollution crisis. They

either end up littering our streets, parks, beaches, and oceans, or they accumulate in our landfills, leaching dangerous chemicals into the soil, harming wildlife and our ecosystem. Source One's cup lids and stirrers are made from organic PLA materials, which are easily recyclable, biodegradable, and compostable, making them a more sustainable solution for the planet and your company.

So, next time you order disposable paper hot cups and beverage accessories for your company, ask about the plastics they contain. You can make a truly sustainable choice by contacting Source One to order your biodegradable disposable cups and other eco-friendly tableware products.

Recommendation

Disposable paper cups are easily decomposed by microorganisms. Hence they create lesser pollution issues and can be easily buried as compost or can be easily burned causing less pollution compared to disposable plastic cups. so our recommendation is all drinking beverage company's better to use disposable paper cups.

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