

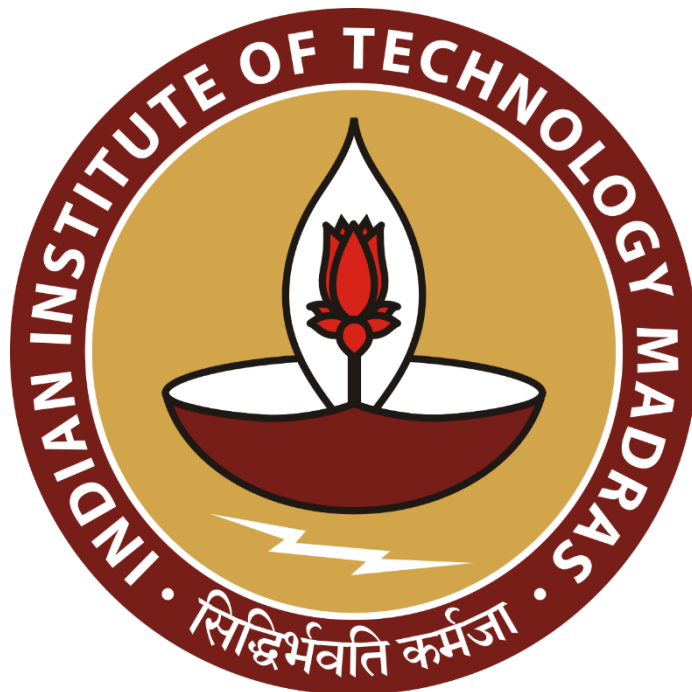
Optimizing Inventory Management and Supply Chain Efficiency

A Mid-Term report for the BDM capstone Project

Submitted by

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Declaration Statement

I am working on a Project titled "Optimizing Inventory Management and Supply Chain Efficiency". I extend my appreciation to Katha Coffee and Bakehouse, for providing the necessary resources that enabled me to conduct my project.

I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities. The data has been gathered from primary sources and carefully analyzed to assure its reliability.

Additionally, I affirm that all procedures employed for the purpose of data collection and analysis have been duly explained in this report. The outcomes and inferences derived from the data are an accurate depiction of the findings acquired through thorough analytical procedures.

I am dedicated to adhering to the principles of academic honesty and integrity, and I am receptive to any additional examination or validation of the data contained in this project report.

I understand that the execution of this project is intended for individual completion and is not to be undertaken collectively. I thus affirm that I am not engaged in any form of collaboration with other individuals, and that all the work undertaken has been solely conducted by me. In the event that plagiarism is detected in the report at any stage of the project's completion, I am fully aware and prepared to accept disciplinary measures imposed by the relevant authority.

I understand that all recommendations made in this project report are within the context of the academic project taken up towards course fulfillment in the BS Degree Program offered by IIT Madras. The institution does not endorse any of the claims or comments.

Signature of Candidate: 

Name: Anirudh Thimmaraju Penumatcha

Date: 26/03/24

1 Executive Summary and Title

The project focuses on Katha Coffee and Bakery house located at Banjara hills, Hyderabad. The business is B2B and deals in the segment of F&B. Katha produces specialty coffee, artisanal bakery options and has an extensive collection of music and vinyl records. Their most selling items are the cold brews, the iced teas, and their croissant options. Additionally, this business has a very high foot traffic of music enthusiasts.

The primary issue that the organization is facing is Increased expenditure on inventory and other resources without a substantial increase in sales or turnover rates. Katha's operational efficiency is hindered by a fragmented data collection system, where inventory data is dispersed across various platforms including Excel files, manual entry logs, and online billing platforms like Paidpooja. This disarray obscures the resource flow, impeding effective problem-solving efforts. Moreover, the company's heightened spending is exacerbated by limited negotiation leverage and an over-reliance on select suppliers.

Renowned for its specialty coffee, Katha's hallmark cold brew is crafted through a meticulous roasting process with a unique blend of Barako beans. However, the exclusivity of this method limits supplier options, weakening Katha's bargaining power and forcing excessive spending despite suboptimal supplier performance and reliability. Addressing these challenges is imperative to fortify Katha's competitive edge and optimize resource utilization.

In this report we will focus on the 6 months of data provided (September 2023 to March 2024) by Katha coffee house for the analysis. The goals for the midterm are:

- Create Metadata and a descriptive analysis for provided data
- Identify items / categories with increased spendings
- Understand Supplier performance compared to industry standard

2 Proof Of Originality of Data

For the proof of originality of Data, I am Submitting a short video interview I had with the co-founder of Katha, Pravishta Nadella. I am also submitting photos of Katha Coffee House and a screenshot of an email verifying the authenticity of the data in lieu of a letterhead.



n

Navkar Mehta

to me

10:16 PM (30 minutes ago)

☆ ↶ ⋮

Greetings Anirudh,

Please Find attached the requested inventory levels data, procurement data and supplier information for the Business Data. Management project. This mail can serve as proof of Authenticity of data.

Let me know if you have any concerns.

Regards,
Navkar Mehta,
Head of Operations,
Katha Coffee Pvt. Ltd.
Hyderabad,
Telangana, India

2 Attachments • Scanned by Gmail

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Purchase_Report...

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Katha 2023 purch...

Google drive containing the interview video can be found [here](#)

3 Metadata and Descriptive Analysis

I've collected the data of inventory purchases (and other resources) of Katha Coffee House over the months of September through November 2023, and January through March 2024. Available data sources with information regarding Inventory Levels and Procurement processes were maintained by Katha across different data collection methods disjointly. Data was recorded in manual bookkeeping processes, excel sheets, and PaidPooja, an online POS software for F&B Businesses.

First open source OCR was used to convert part of the manually written files to an excel spreadsheet, the ones that could not be processed this way were manually entered. After this, using purchase order numbers and Invoice numbers as keys, available data structures from Excel sheets and PaidPooja documents were compiled to make a complete data sheet. Then this was cleaned of duplicate entries and as many missing errors as possible were filled through manually. The inventory levels data consisted of 2 different categories each covering a different 3 month period. Suitable analysis methods were charted and performed in google sheets and google colab.

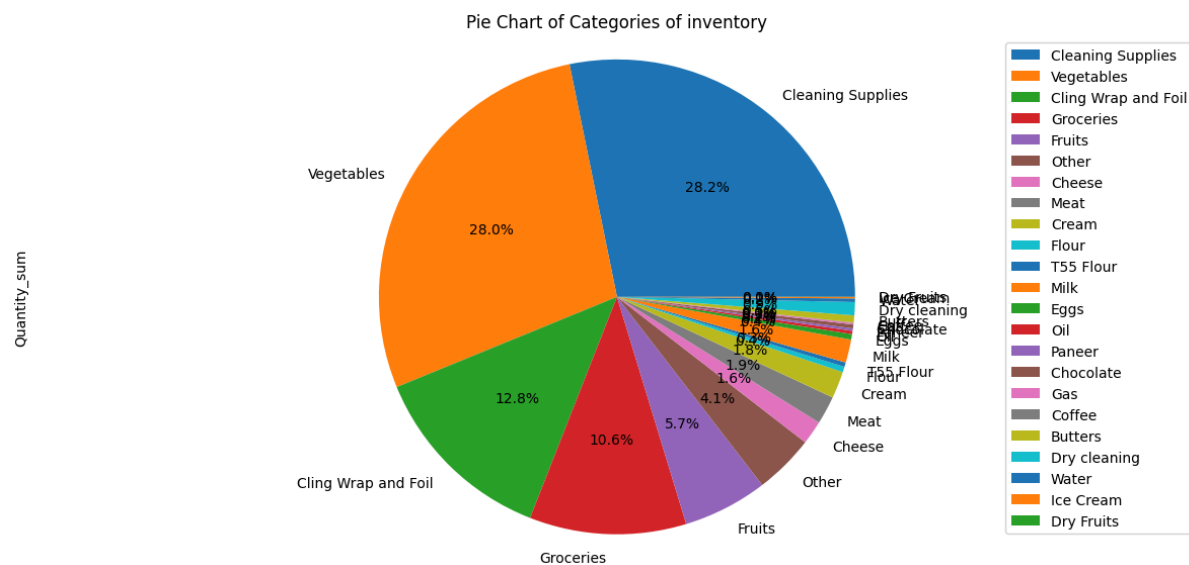
However, the business chose not to share any major financial data, leading to some data inconsistencies which were appended with purchase order quantity data. All this data has been compiled to a [google sheets document](#) which was then used for calculating metadata and the subsequent analysis processes.

Katha 2023 Purchase Tracker: September - November

- Data entries: Date, Invoice number, Category, Item Description, Units (L/Kg/pc), quantity.

Date	Invoice	Vendors	Category	Item	Units (L/kg/pc)	Quantity
01/09/23	11386	SPREADERS FOODS SOLUTIONS	Groceries	LC CHICKEN SPICY MORTADELLA LOG	KG	4
01/09/23	11386	SPREADERS FOODS SOLUTIONS	Groceries	PRESIDENT UNSALTED BUTTER 500GM	PCS	60
01/09/23	11386	SPREADERS FOODS SOLUTIONS	Groceries	GOLOKA BURRATA CHEESE 600GM	KG	6
01/09/23	11386	SPREADERS FOODS SOLUTIONS	Groceries	DEL MONTE EGGLESS MAYO 1KG	KG	12
01/09/23	11386	SPREADERS FOODS SOLUTIONS	Oil	OIL SESAME TOASTED 500ML	PCS	4
01/09/23	11386	SPREADERS FOODS SOLUTIONS	Groceries	GOLDEN CROW N CORN FLAKES 500G	PCS	2
01/09/23	11386	SPREADERS FOODS SOLUTIONS	Groceries	RICHS WILBER FARMS DAIRY CREAM 1LTR	PCS	12
01/09/23	11386	SPREADERS FOODS SOLUTIONS	Groceries	MONIN PEACH NAT TEA IN 1LTR	PCS	5
01/09/23	11386	SPREADERS FOODS SOLUTIONS	Groceries	DABUR REAL HONEY 1KG	KG	5
01/09/23	867	A M FRESH VEGETABLE & FRUITS	Vegetables	ONION	KG	3
01/09/23	867	A M FRESH VEGETABLE & FRUITS	Vegetables	TOMATO B	KG	5
01/09/23	867	A M FRESH VEGETABLE & FRUITS	Vegetables	SPRING ONION	KG	0.5
01/09/23	867	A M FRESH VEGETABLE & FRUITS	Vegetables	CORRIONDER	KG	0.5
01/09/23	867	A M FRESH VEGETABLE & FRUITS	Vegetables	PUDINA	KG	1
01/09/23	867	A M FRESH VEGETABLE & FRUITS	Vegetables	CHERRY TOMATO	KG	1
01/09/23	867	A M FRESH VEGETABLE & FRUITS	Vegetables	Y-ZUCCHINI	KG	0.5
01/09/23	867	A M FRESH VEGETABLE & FRUITS	Vegetables	G-ZUCCHINI	KG	0.5
01/09/23	867	A M FRESH VEGETABLE & FRUITS	Vegetables	GREEN SALAD	KG	0.5
01/09/23	2269	SRI RAMDEV MARKETING	Cleaning Sup	TOILET ROLL	PCS	100
01/09/23	2269	SRI RAMDEV MARKETING	Cleaning Sup	CLING FILM 600(1.6KG)BIO	PCS	12
01/09/23	2269	SRI RAMDEV MARKETING	Cleaning Sup	NITRILE POWDER FREE BLUE GLOVES	NOS	6
01/09/23	2269	SRI RAMDEV MARKETING	Cleaning Sup	GARBAGE BAG 35*45	KG	20
02/09/23	3942	CORRIDO SEVEN COFFEE ROASTERS	Coffee	CASCARA	KG	5
02/09/23	3942	CORRIDO SEVEN COFFEE ROASTERS		SHIPPING CHARGES		1
02/09/23	336	AROMA SPICES	Groceries	RICE BAGS (26KG)	BAGS	1
02/09/23	336	AROMA SPICES	Groceries	SUGAR	KG	15
02/09/23	336	AROMA SPICES	Groceries	GHEE		4

Image1: Excerpt from September 2023 Purchase Tracker



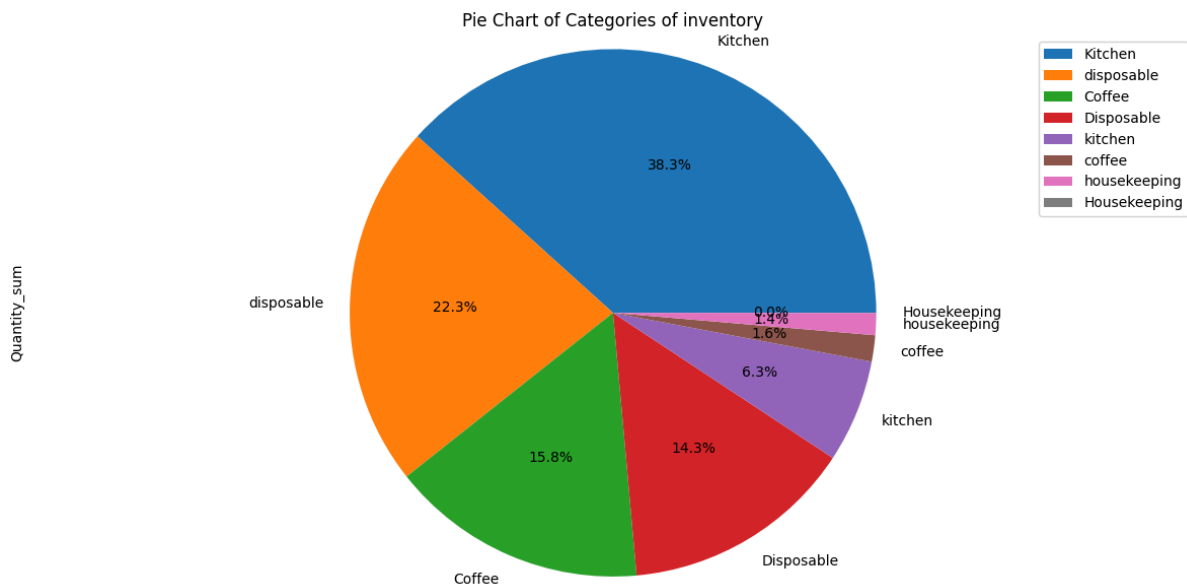
Plot2: Distribution of quantities of inventory purchased by category over 3 months

Katha 2024 Purchase Tracker: Jan - March

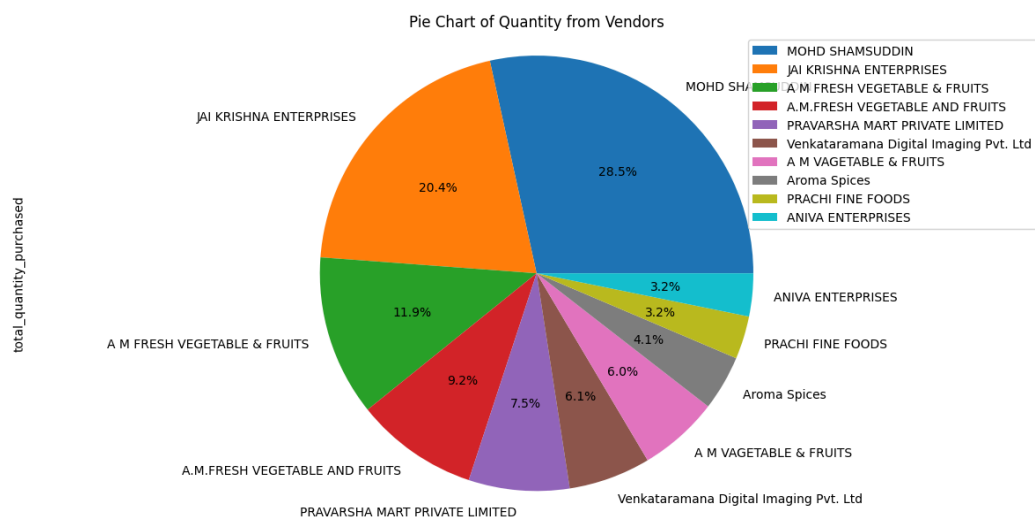
- Data Entries: Company, GST No, State, State Code, City, Address, Zip Code, PAN, CIN, Vendors, Customer Address, GST No, Phone, Email, Type, Invoice No., MRN/PO No., Invoice Date, Raw Material, Category, Sub Category, Unit, Quantity, Raw Material, ID, Description

Customer	Lot No	State	State Code	City	Address	Zip Code	AN	CIN	Vendors	Customer Alt. GST No	Phone	Email	Type	Invoice No.	MWYNP Co.	Invoice Date	Rev. Material	Category	Sub Category	MGR Code	Exp. Code	Qty	Quantity	Rev Material	Alt. Lot No	Description
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			MOCK SHAMROUSE				Purchase			1	2021-03-20	Lemon	Kitchen			0	18454	18454		
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			KOCH SHAMROUSE				Purchase			1	2021-03-20	Almond	Kitchen			0	18455	18455		
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			PRANANATH M REQUERUP E LAAL/077372		7702990600		Purchase	306168		138	1/24/2021	Cin Mils	Coffee	Coffee Indent		0	1867112			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			PRANANATH M REQUERUP E LAAL/077372		7702990600		Purchase	306168		138	1/24/2021	Cin Mils	Coffee	Coffee Indent		0	1867112			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			MASQATI DARY	SHAMROUSE/STATION			Purchase			1	2021-03-20	Masqati Dary	Kitchen			0	1867119			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			AKASH ENTERPRISE & AGRO & 121 ROAD/57372		8036360367		Purchase			1	2021-03-20	AKASH ENTERPRISE & AGRO	Kitchen			0	1867218			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867219			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867220			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867221			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867222			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867223			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867224			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867225			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867226			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867227			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867228			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867229			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867230			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867231			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867232			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867233			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867234			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867235			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867236			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867237			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867238			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867239			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867240			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867241			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867242			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867243			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867244			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867245			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867246			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867247			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867248			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867249			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867250			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867251			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867252			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867253			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867254			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867255			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867256			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867257			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867258			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867259			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867260			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867261			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867262			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867263			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 30-06/200000		818644347	bompanzafarm@protonmail.com	Purchase			1	2021-03-20	Bonanza LLC Canna, Inc	Kitchen			0	1867264			
Karma Coffee and Beanhouse	0-2-2021, Not Sur	Tennessee	30	Memphis	0-2-2021, Not Sur	300034			Bonanza LLC Canna, Inc. 3																	

Image2: Excerpt from January 2024 Purchase Tracker



Plot2: Distribution of quantities of inventory purchased by category over 3 months



Plot0: A comparison of all inventory vendors for Katha Coffee house.

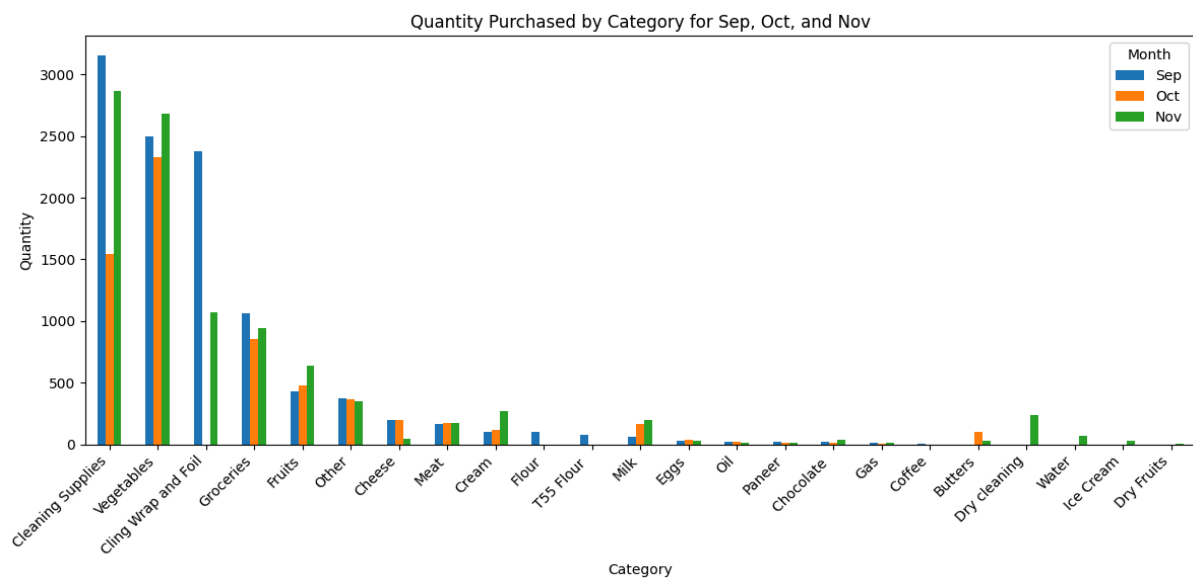
Katha coffee house offers a huge variety of cuisines and meal options that require fresh ingredients. This data is shown in the vast number of vendors and constant purchase orders they have. Here are a few noteworthy numbers in the data

Total purchase orders over 6 months: 4194

Largest Inventory Vendor: MOHD Shamshuddin 28.5%

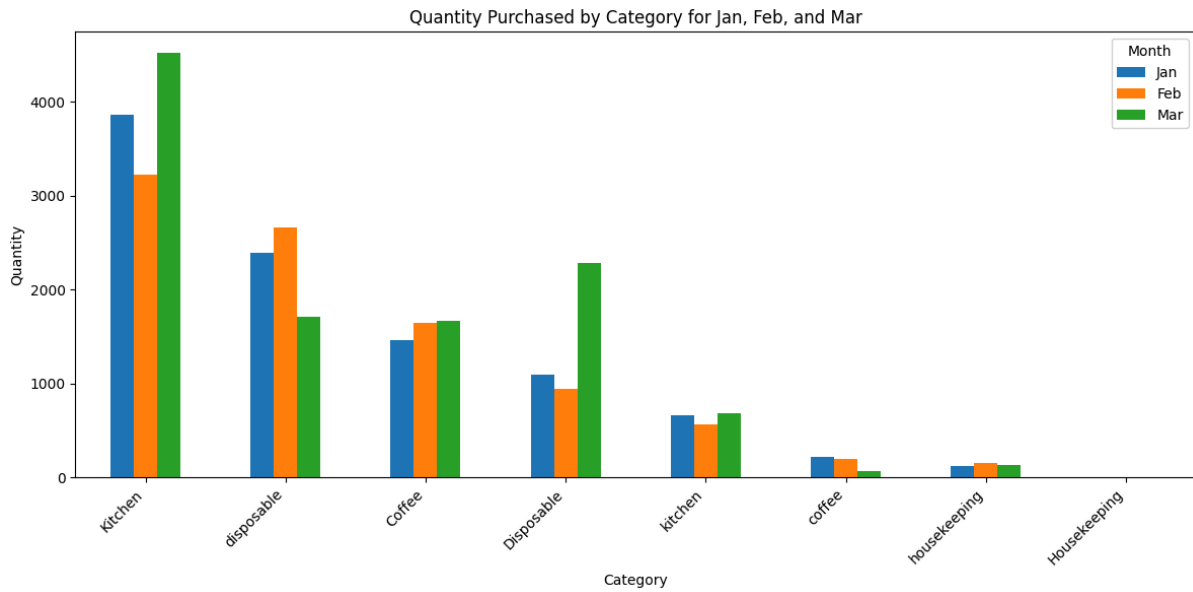
Mohd Shamsuddin is a private supplier of Barako beans and they are one of the only suppliers in India that follow the traditional roasting method that gives the beans their unique flavor. They also have a monopoly over the market in Hyderabad, as beans that are sold in the 288-300 rupees range in India are sold for 350+ rupees per kg to Katha.

4 Detailed Explanation of Inventory-related Analysis Process



Plot1: Inventory Distribution across mentioned categories over 3 months

Trend Comparison Analysis: Over the 3 months, monthly order quantities were compared by category. We can see in this chart that Katha has irregular inventory reorders. We can see that cleaning supplies and cling wrap with a larger use period were overstocked. This is proof that the reorder points need to be revised.

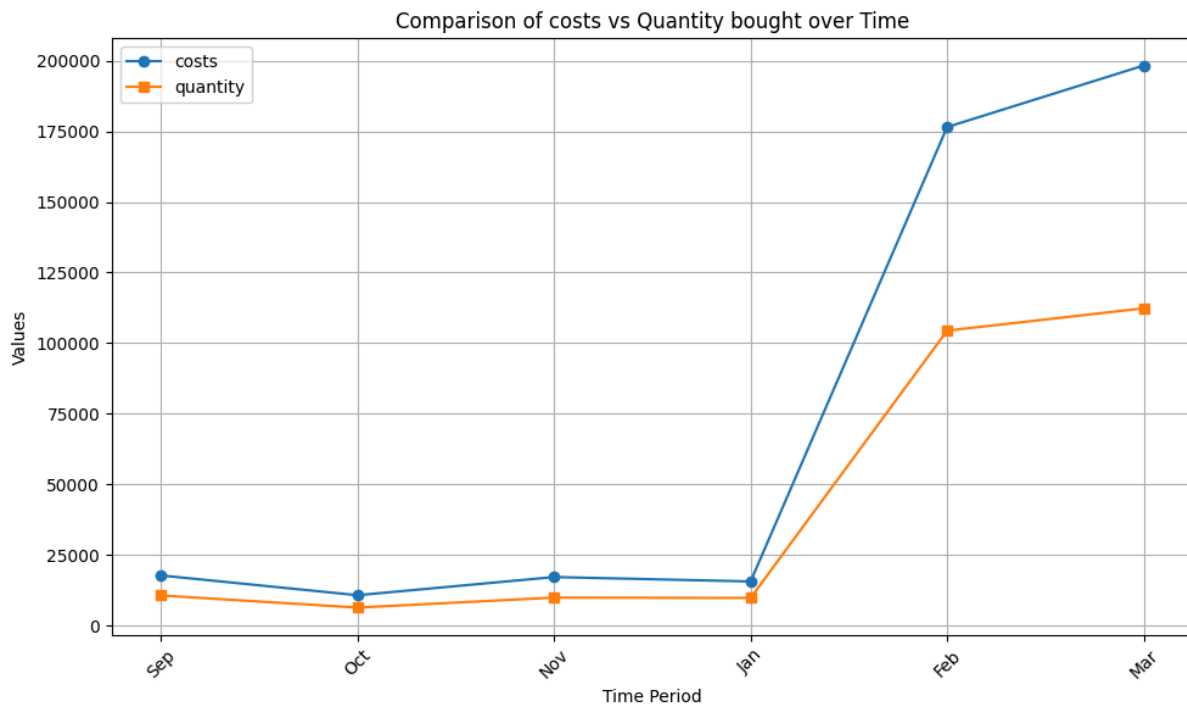


Plot1: Inventory Distribution across mentioned categories over 3 months

Trend Comparison Analysis: Over the 3 months, monthly order quantities were compared by category. In the months of February and March Katha had a significantly higher operating cost related to inventory expenditure. However we fail to see the same reflected in amounts of quantities purchased, hinting to a suboptimal uses of funds given that there were no significant changes in industry prices during this period. We can also see that wastage charges have increased by a substantial amount.

5 Results and Findings

Katha has repeated cases of suboptimal inventory levels, leading to both overstocking and stockouts. This can partly be attributed to misplaced reorder points. However, through cleaning and collecting the data, It is evident that while the inventory data is being recorded adequately, the process of doing so is mismanaged. Disjoint data networks have to be fixed to create a reliable inventory data system and implement the necessary management practices.



Plot5: Comparison of inventory expenditure vs Quantity bought

Inventory expenditure has increased over the last 2 months disproportionate to the quantities ordered. This fact is attributed to the increase in price put forward by the primary supplier of coffee beans. Further supplier data should be processed and industry research should be done to accurately measure supplier performance and search for suitable alternatives.