Investigating the Economies of Urban Vendors of Jammu City

MAJOR PROJECT REPORT

SEMESTER- 2

FOUR-YEAR UNDERGRADUATE PROGRAMME

(DESIGN YOUR DEGREE)

UNIVERSITY OF JAMMU, JAMMU

SUBMITTED BY THE TEAM: **URBAN EXPLORERS**

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Submitted on: ____ September, 2024

CERTIFICATE

The work embodied in this report entitled "**Investigating the Economies of Urban Vendors of Jammu City**" has been done by Team Urban Explorers including group members- Avichal Badyal, Divya Verma, Kashvi Vaid, Neamat Kour, Sarnish Kour, and Shubham Sharma as a Major Project for Semester 2nd of Four-Year Undergraduate Programme (Design Your Degree). This work was carried out under the guidance of Mentors Dr. Anil Gupta, Dr. Shallu Sehgal and Dr. Sunil Bhougal for the partial fulfilment of the award of the Design Your Degree, Four Year Undergraduate Programme, University of Jammu, Jammu & Kashmir. This project report has not been submitted anywhere else.

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ACKNOWLEDGMENT

We can acknowledge all those who helped and guided us during our research work. First and foremost, we thank almighty god from the depth of our hearts for generating enthusiasm and granting us spiritual strength to pass through this challenge successfully.

We Sincerely thank Prof. Umesh Rai, Vice Chancellor of the University of Jammu, for his continuous support throughout our project. We also extend our heartfelt thanks to Prof. Dinesh Singh, Padma Shri awardee and Chairman of the Higher Education Council, J&K UT, for his encouragement and backing. We are deeply grateful to Dr. Anil Gupta, Dr. Shallu Sehgal and Dr. Sunil Bhougal for their constant guidance and support at every stage of this project. Their knowledge, feedback, and encouragement have been a great help in shaping our research and making sure it meets high standards.

We thank Prof. Alka Sharma, our Head of Department, for her unwavering support in helping us complete this project. We would also like to thank my classmates for their valuable contributions. Their willingness to share ideas, work together, and offer assistance has made a big difference in overcoming challenges and achieving our goals. Finally, We are truly thankful to everyone who supported us. Without their combined efforts, this project would not have been successful.

ABSTRACT

This study investigates the socio-economic dynamics of urban vegetable vendors in Jammu City, focusing on the challenges, economic sustainability, and strategies employed by vendors in their day-to-day operations. Using primary data collected from 50 vegetable vendors, the research explores key factors such as income levels, inventory management, pricing strategies, and leftover utilization. The analysis was conducted using **SPSS** (Statistical Package for the Social Sciences), applying non-parametric statistical tests due to the non-normal distribution of the data.

Findings indicate that vendors face multiple challenges, including market price fluctuations, competition, spoilage due to inadequate storage, and limited access to financial resources. Despite these obstacles, many vendors demonstrate resilience through strategic pricing, experience-based decision-making, and the use of leftover produce. The study also uncovers the potential impact of government support, such as financial assistance programs and improved storage infrastructure, on enhancing vendors' economic viability.

The report concludes with practical recommendations, including the provision of training programs, access to better storage facilities, and the adoption of digital platforms to connect vendors with consumers. These interventions aim to improve profitability, reduce waste, and create a more sustainable and inclusive urban economy for vegetable vendors in Jammu City.

This research offers valuable insights for policymakers, urban planners, and stakeholders working to support informal urban economies and enhance the livelihoods of small-scale vendors.

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CHAPTER 1

INTRODUCTION

1.1 About vegetable vending

In recent years, there has been a growing trend towards selling fresh vegetables directly to consumers, bypassing intermediaries and connecting farmers directly with buyers. This practice, commonly referred to as vegetable vending, has gained immense popularity due to its numerous benefits, including fresher produce, lower costs, and increased transparency in the supply chain [1-3].

1.2 Types of Vegetable Vendors

1.2.1 Formal Vendors:

- **Kirana Stores:** These family-run shops offer necessities, including fruits and vegetables. While convenience is their strength, freshness may vary.
- **Supermarkets:** Gaining popularity in urban areas, supermarkets like Reliance Fresh and Big Bazaar provide a wider selection and organized sourcing.
- **Hypermarkets:** Metro Cash & Carry and Walmart cater to businesses and large families with bulk quantities at competitive prices.
- **Online Grocery Stores:** Big Basket, Grofers, and Amazon Fresh offer home delivery convenience, sourcing produce from diverse suppliers [4].

1.2.2 Informal Vendors:

- **Vegetable Carts:** Mobile vendors pushing or cycling carts laden with fresh produce provide an affordable and readily available option.
- **Street Vendors:** Similar to carts, these temporary stalls offer seasonal and local varieties alongside other items.
- **Farmers' Markets (Haats):** Traditional gatherings enable direct purchase from farmers, ensuring freshness and competitive pricing.

- **Organic Stores:** Catering to the growing demand for chemical-free produce, these stores source vegetables from certified organic farms.
- **Weekly Markets:** Held once a week, these temporary markets offer various goods, including vegetables, often at lower prices.
- **Village Haats:** Vital sources for villagers, these rural markets connect farmers directly with consumers and promote local produce.
- **Direct Farm Purchases:** Consumers increasingly bypass middlemen by purchasing directly from farms through farm visits or community-supported agriculture (CSA) programs, ensuring freshness and supporting local farmers [5].

1.3 Status of Vegetable Vending in India: A Mixed Picture

The landscape of vegetable vending in India is vast and diverse, marked by both promising developments and persistent challenges. Here's a glimpse into the current state of affairs:

1.3.1 Positives:

- **Significant contribution to the economy:** Vegetable vending employs millions of Indians, particularly women and marginalized communities, and contributes significantly to the informal economy.
- **Growing organized markets:** Initiatives like the National Mission on Sustainable Agriculture (NMSA) and Rashtriya Krishi Vikas Yojana (RKVY) are promoting the creation of Farmers' Markets (FMs) and APMCs (Agricultural Produce Marketing Committees), providing vendors with formal structures and better access to consumers.
- **Technological advancements:** Mobile apps like mKisan and eNAM are improving market information dissemination and facilitating farmer-consumer linkages, potentially empowering vendors [6].

1.3.2 Challenges:

- **Predominance of the unorganized sector:** The majority of vegetable vending occurs in traditional open markets and on roadsides, lacking basic infrastructure, hygiene standards, and storage facilities, leading to post-harvest losses and reduced income for vendors.

- **Vulnerability to exploitation:** Middlemen often act as gatekeepers, taking a significant share of profits from vendors, leaving them with meagre earnings.
- **Limited access to finance and credit:** Many vendors lack access to formal financial services, hindering their ability to invest in better infrastructure, transportation, and marketing.

1.3.3 Government Initiatives:

- **Schemes like PM SVANidhi:** This scheme provides micro-loans to street vendors to formalize their businesses and improve their livelihoods.
- **Creation of e-mandis:** Online platforms like eNAM connect farmers directly with buyers, potentially bypassing exploitative middlemen.
- **Focus on value addition and processing:** Initiatives like Sampurna Krishi Yojna promote value addition to agricultural produce, potentially creating better market opportunities for vendors [7].

1.4 Key Data insights on vegetable vendors in India

- **Informal vendors dominate:** NSSO and AMIS reports suggest informal vendors like street vendors, carts, and farmers' markets contribute 70-80% of the market share [8].
- **Formal vendors are growing:** Supermarkets, kirana stores, and online grocers hold the remaining 20-30%, with a steady increase in recent years [9].
- **National Sample Survey Organisation (NSSO):** Their Periodic Labour Force Survey (PLFS) 2017-18 estimated over 8 million street vendors in India, contributing significantly to the non-agricultural informal sector, which itself forms 41% of the national workforce [10].
- **Studies and reports:** A 2018 NITI Aayog report stated the informal sector, including street vendors, contributes 20-25% of India's GDP [11].
- **Significant, but under-reported:** Estimates suggest vegetable vending contributes around 2.5-3.5% to India's GDP [12].

CHAPTER 2

PROBLEM STATEMENT

2.1 Project description

Vegetable vending is a crucial aspect of urban economies, providing essential goods while also serving as a source of livelihood for many individuals. This project aims to delve into the socio-economic background, economic dynamics, utilization of leftover vegetables, and challenges faced by vegetable vendors. By comprehensively understanding these aspects, we seek to provide insights and recommendations to improve the sustainability and profitability of their businesses.

2.2 Problem statement

Despite their significant contribution to the urban food supply chain, vegetable vendors often operate within precarious socio-economic conditions. This study aims to comprehensively analyze the socio-economic background of vegetable vendors, conduct an in-depth economic analysis of their activities, investigate their utilization of leftover vegetables, and identify and analyze the multifaceted challenges they encounter. By addressing these objectives, this research seeks to shed light on the complexities of urban vegetable vending and provide insights that can inform policies and interventions aimed at improving the livelihoods and working conditions of vegetable vendors.

2.3 Objectives of the study

- To analyze the socio-economic background of vegetable vendors.
- To conduct a thorough economic analysis of urban vegetable vendors.
- To investigate the utilization of leftover vegetables by vendors.
- To identify and analyze the challenges encountered by vegetable vendors across various dimensions.

2.4 Developed Hypotheses

2.4.1 Formulation of Hypothesis

- **Null Hypothesis (H_0)**

The null hypothesis is a statement that suggests there is no significant effect or difference between the variables being studied. It assumes that any change or relationship we observe in the data is due to random chance or natural variation rather than a real effect.

2.4.2 Hypothesis Developed Based on the Objectives

H_{01}: There is no significant association between Monthly Income and Years of Experience.

H_{02}: There is no significant association between Literacy Rate and Monthly Income.

H_{03}: Changes in income levels have no effect on the frequency of leftover goods.

H_{04}: There is no association between monthly income and the amount of savings.

H_{05}: Variations in income levels have no impact on inventory diversity or the amount of savings.

H_{06}: Adjustments in pricing have no effect on the amount of loans required.

H_{07}: Market price fluctuations have no effect on the quantity of leftover stock.

H_{08}: There is no association between years of experience and levels of spoilage.

H_{09}: Storage conditions have no relationship with inventory diversity, the number of suppliers, competition levels, basic facilities, or the type of vendors.

H_{010}: Financial assistance has no effect on the frequency of complaints or varies by vendor type.

H_{011}: Long working hours have no effect on the ability to attract more customers.

H_{012}: The impact of events is not related to unpredictable demand, leftover frequency, or changes in income.

H_{013}: Effective Supply Demand Perception has no effect on unpredictable demand or the frequency of leftovers.

H_{014}: Age has no effect on the effectiveness of Supply Demand Perception.

H_{015}: There is no correlation between expense management and the ability to attract customers.

H_{016}: There is no correlation between storage capacity and the impact of supply demand fluctuations.

H_{017}: There is no correlation between changes in income and event impact.

H_{018}: There is no correlation between market price fluctuations and leftover frequency.

H_{019}: There is no correlation between sourcing difficulties and inventory diversity.

H_{020}: There is no correlation between years of experience and leftover quantity.

H_{021}: There is no correlation between financial assistance and the ability to manage spoilage.

H_{022}: There is no correlation between supply demand perception and market price fluctuations.

H_{023}: There is no correlation between transportation logistics and inventory diversity.

H_{024}: There is no correlation between compliance and financial assistance.

2.5 Tests Applied

To test the hypotheses, two primary statistical tests were employed:

a) Chi-Square Test for Independence:

- Used to determine if there is a significant association between two categorical variables.

b) Kruskal Wallis Test:

- The Kruskal Wallis test is used to determine if there are significant differences between three or more independent groups on an ordinal or continuous outcome.

c) Kendall's Tau b Test:

- Kendall's Tau is a non-parametric measure of the strength and direction of the association between two ranked (ordinal) variables.

2.6 Significance

- This project report holds significant value as it sheds light on the challenges faced by vegetable vendors, a crucial component of the food supply chain. By identifying and analyzing these challenges, the report provides insights that can inform policymakers, industry stakeholders, and vendors themselves about the key issues affecting the efficiency and sustainability of vegetable vending businesses.

- Understanding these challenges is essential for implementing targeted interventions and policy measures aimed at overcoming obstacles and improving the overall functioning of the vegetable vending industry. Additionally, the report's findings can guide vendors in developing

strategies to enhance their operations, improve customer satisfaction, and achieve greater profitability.

- Overall, this project report on vegetable vendors carries significant importance in informing decision-making, driving improvements, and fostering innovation within the vegetable vending industry, ultimately benefiting vendors, consumers, and the broader food system.

2.7 Project Outcomes

This comprehensive project has delved into four key areas crucial for understanding and improving the livelihoods of vegetable vendors: their socioeconomic background, economic dynamics, utilization of leftover vegetables, and challenges. Through a combination of surveys, economic analyses, and qualitative assessments, this study aimed to shed light on the challenges faced by vegetable vendors and identify pathways for enhancing their economic well-being.

- **Insights into Socio-Economic Background:** A thorough understanding of the socio-economic backgrounds of vegetable vendors, including factors such as education level, household income, family size, and migration status.

- **Economic Analysis:** Detailed insights into the economic activities of urban vegetable vendors, including their revenue streams, expenses, profit margins, and financial challenges.

- **Utilization of Leftover Vegetables:** Understanding how vegetable vendors manage and utilize leftover vegetables, including strategies for minimizing waste and maximizing profit.

- **Identification of Challenges:** Identification and analysis of the various challenges faced by vegetable vendors, such as lack of access to formal markets, competition with larger retailers, financial constraints, infrastructure limitations, and regulatory barriers.

- **Policy Recommendations:** Recommendations for policymakers, urban planners, and relevant stakeholders to address the identified challenges and improve the working conditions and livelihoods of vegetable vendors. This may include suggestions for supportive policies, infrastructure development, access to finance, skill development programs, and market linkages.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Methodology of the study

"Investigating the Economies of Urban Vendors of Jammu City" typically revolved around various elements in making the project successful.

I. In the initial stage, mentees formulated project objectives and identified key problem statements. After thorough deliberation, the area of survey for vegetable vendors in the city of Jammu is narrowed down.

II. The second step involved determining the sample size for our study, specifically the number of vendors to be included and examined. After consulting with our mentors, mentees decided that the research sample for this project would consist of 50 vendors.

III. For the present project work, primary data is collected through field surveys with the help of a well-structured questionnaire created with guidance from the mentors.

IV. The questionnaire is divided into 4 sections-

- **Section 1**- This section is on the socio-economic background of the respondent.
- **Section 2**- This section is on the economy of urban vegetable vendors investigating the supply and demand, with a few questions regarding their finance management.
- **Section 3**- This section focused on the utilization of leftover vegetables. Questions asked in this section are on how much vegetables are left and what they do with these vegetables when rotten.
- **Section 4**- This last section is on the challenges faced by them like sanitation problems, sourcing and inventory, transportation problems, high competition, attracting and retaining customers, etc.
- The developed questionnaire is mentioned in the annexure.

V. After the finalization of the interview schedule and approval by the mentors, group members conducted a pilot study for the further improvement of the questionnaire.

VI. For the survey, teams are divided into two groups of three members each, to carry each and everything smoothly without any disruption.

3.2 Data Analysis and Interpretation

After the collection and tabulation of data is completed, we started working upon the Data Analysis and Interpretation. In this phase, hypotheses were formulated based on the study's objectives. Data normality was assessed using SPSS. Based on that, Non-parametric tests were applied to test the hypotheses and evaluate statistical significance, providing insights into the economic conditions and challenges faced by the vendors.

CHAPTER 4

DATA ANALYSIS

In this chapter, we delve into the process of data analysis, focusing on how raw data is transformed into meaningful insights. The analysis was carried out using **SPSS** (Statistical Package for the Social Sciences) version 21, a powerful and widely used software tool known for its ability to handle large datasets, perform complex statistical procedures, and generate comprehensive reports.

SPSS simplifies the process of analyzing quantitative data through its user-friendly interface and an extensive range of statistical tests, making it an essential tool for researchers across various fields. This chapter will walk through the key steps taken in our analysis, from data preparation and cleaning to the application of statistical tests and the interpretation of the results [13].

4.1 Normality Test

Normality tests are used to determine if a dataset is approximately normally distributed, which is an important assumption in many statistical tests.

4.1.1 Types

- **Shapiro-Wilk Test:** One of the most widely used tests for normality. If the p-value is greater than 0.05, the data is considered to follow a normal distribution.
- **Kolmogorov-Smirnov Test:** Compares the data distribution to a normal distribution. A p-value > 0.05 indicates normality.

4.1.2 Steps

a) Open Your Data in SPSS:

Import your dataset by clicking **File > Open > Data** and select your dataset.

b) Navigate to the Analysis Menu:

Go to **Analyze > Descriptive Statistics > Explore**.

c) Choose Your Variable(s):

In the dialog box, move the variable(s) for which you want to test normality into the **Dependent List**.

d) Choose Plots:

Click the **Plots** button and check the box for **Normality plots with tests**. You can also select **Histogram** or **Q-Q Plot** for a visual inspection.

e) Run the Tests:

Click **Continue** and then **OK** to run the analysis. SPSS will now perform both the **Shapiro-Wilk** and **Kolmogorov-Smirnov** tests.

f) Interpret the Output:

The results will appear in the SPSS output window. You'll see p-values for both the Shapiro-Wilk and Kolmogorov-Smirnov tests.

- If **$p > 0.05$**, the data is normally distributed.
- If **$p \leq 0.05$**, the data significantly deviates from a normal distribution.

4.1.3 Interpretation

- For Normal Variables, we use Parametric Tests to Test the Hypothesis.
- For Not Normal Variables, we use Parametric Tests to Test the Hypothesis.

4.1.4 Table Used

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
LiteracyRate	.320	49	.000	.774	49	.000
TypeofVendor	.391	49	.000	.677	49	.000
Ch.Expensemgt	.258	49	.000	.807	49	.000
Loans	.488	49	.000	.495	49	.000
SeparateBudget	.459	49	.000	.551	49	.000
Savings	.344	49	.000	.637	49	.000
sd.impact	.276	49	.000	.769	49	.000

SDPerception	.226	49	.000	.881	49	.000
PricingAdjustment	.272	49	.000	.784	49	.000
Eventimpact	.184	49	.000	.885	49	.000
YearsofExperience	.276	49	.000	.768	49	.000
PricingMethod	.515	49	.000	.383	49	.000
TypeofResidence	.397	49	.000	.618	49	.000
MonthlyIncome	.304	49	.000	.771	49	.000
ChangeinIncome	.198	49	.000	.903	49	.001
LeftoverQuantity	.309	49	.000	.755	49	.000
LeftoverFrequency	.485	49	.000	.489	49	.000
Ch.Sourcing	.536	49	.000	.127	49	.000
Ch.Spoilage	.272	49	.000	.822	49	.000
Ch.UnpredictableDemand	.284	49	.000	.844	49	.000
Ch.BasicFacilities	.395	49	.000	.617	49	.000
Ch.UnfavourableWeather	.249	49	.000	.890	49	.000
Ch.Compliance	.536	49	.000	.197	49	.000
Ch.AttractingCustomers	.252	49	.000	.843	49	.000
Ch.LongWorkingHours	.246	49	.000	.857	49	.000
Ch.FinancialAssistance	.540	49	.000	.201	49	.000
Ch.DiverseInventory	.223	49	.000	.836	49	.000
Ch.Competition	.223	49	.000	.857	49	.000
Ch.MktPriceFluctuations	.255	49	.000	.843	49	.000
Ch.Transport	.522	49	.000	.384	49	.000
Ch.Storage	.182	49	.000	.881	49	.000

a. Lilliefors Significance Correction

4.1.5 Results

- All variables tested (e.g., LiteracyRate, TypeofVendor, Loans, Savings) showed significant non-normality.
- The Shapiro-Wilk test, which is more sensitive for smaller sample sizes (n < 50), consistently indicated non-normal distribution with p-values close to 0 for all variables.
- The Kolmogorov-Smirnov test also showed similar results, reinforcing the conclusion that none of the variables follow a normal distribution.
- Non-parametric tests, which don't require normality assumptions, such as the Chi Square test, Kruskal-Wallis test and Kendall's Tau b correlation were considered for further analysis.

4.2 Testing of Assumptions

a) Monthly Income and Years of Experience

H_{01}: There is no significant association between Monthly Income and Years of Experience.

Test Applied: Chi-Square Test for Independence

Table Used:

MonthlyIncome * YearsofExperience Crosstabulation

Count

		YearsofExperience			
		1	2	3	Total
MonthlyIncome	1	3	3	11	17
	2	9	10	9	28
	3	3	0	2	5
Total		15	13	22	50

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.749[a]	4	.101
Likelihood Ratio	8.692	4	.069
Linear-by-Linear Association	3.812	1	.051
N of Valid Cases	50		

a. 4 cells (44.4%) have expected count less than 5. The minimum expected count is 1.30.

Result:

- **Pearson Chi-Square** = 7.749
  - **Degrees of Freedom (df)** = 4
  - **p-value (Asymp. Sig)** = 0.101
  - Interpretation: The p-value is 0.101, which is greater than the typical significance level of 0.05. This suggests that there is no statistically significant association between **Monthly Income** and **Years of Experience** at the 5% significance level.
- **Likelihood Ratio** = 8.692
  - **Degrees of Freedom (df)** = 4
  - **p-value (Asymp. Sig)** = 0.069
  - **Interpretation**: The p-value of 0.069 is still above 0.05, but closer to significance. This might indicate a marginal association, though not strong enough to conclude significance.
- **Linear-by-Linear Association** = 3.812
  - **Degrees of Freedom (df)** = 1
  - **p-value (Asymp. Sig)** = 0.051
  - **Interpretation:** The p-value is close to 0.05, suggesting a near-significant linear trend between **Monthly Income** and **Years of Experience**. There could be a weak linear association, but it doesn't quite reach conventional significance levels.

Analysis:

The results of the Pearson Chi-Square test suggest that there is no significant association between **Monthly Income** and **Years of Experience** at the 5% level of significance (p = 0.101). However, the p-values of the likelihood ratio (0.069) and the linear-by-linear association (0.051) are approaching significance, indicating that there might be a weak or marginal relationship, especially when looking at the linear trend.

b) Association Between Literacy Rate and Monthly Income

H_{02}: There is no significant association between Literacy Rate and Monthly Income.

Test Applied: Chi-Square Test for Independence

Table Used:

MonthlyIncome * LiteracyRate Crosstabulation

Count

		LiteracyRate			
		1	2	3	Total
MonthlyIncome	1	5	12	0	17
	2	7	15	6	28
	3	0	4	1	5
Total		12	31	7	50

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	5.816[a]	4	.213
Likelihood Ratio	9.195	4	.056
Linear-by-Linear Association	3.192	1	.074
N of Valid Cases	50		

a. 6 cells (66.7%) have expected count less than 5. The minimum expected count is .70.

Result:

- **Pearson Chi-Square = 5.816**
  - **Degrees of Freedom (df)** = 4
  - **p-value (Asymp. Sig)** = 0.213
  - **Interpretation**: The p-value is 0.213, which is greater than the typical significance level of 0.05. This suggests that there is no statistically significant association between Monthly Income and Literacy Rate at the 5% significance level.
- **Likelihood Ratio = 9.195**

- **Degrees of Freedom (df)** = 4
- **p-value (Asymp. Sig)** = 0.056
- **Interpretation**: The p-value of 0.056 is slightly above the 0.05 threshold. While it is not significant at the 5% level, it indicates that there could be a marginal or near-significant association between Monthly Income and Literacy Rate.

➢ **Linear-by-Linear Association = 3.192**

- **Degrees of Freedom (df)** = 1
- **p-value (Asymp. Sig)** = 0.074
- **Interpretation**: The p-value is 0.074, which is above 0.05 but close to significance. This suggests a possible weak linear association between Monthly Income and Literacy Rate, though it does not quite reach the conventional level of significance.

Analysis:

The results from the **Pearson Chi-Square Test** suggest that there is no statistically significant association between Monthly Income and Literacy Rate (p = 0.213). However, both the **Likelihood Ratio (p = 0.056)** and the **Linear-by-Linear Association (p = 0.074)** approach significance, indicating that there may be a weak or marginal relationship between the variables, especially considering the potential linear trend.

c) Change in Income and Leftover Frequency

H_{03}: Changes in income levels have no effect on the frequency of leftover goods.

Test Applied: Chi Square Test

Table Used:

Crosstab

Count

		ChangeinIncome					Total
		1	2	3	4	5	
LeftoverFrequency	1	2	0	0	1	0	3
	2	0	2	1	3	0	6
	3	3	14	16	7	1	41
Total		5	16	17	11	1	50

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	16.391[a]	8	.037
Likelihood Ratio	13.284	8	.102
Linear-by-Linear Association	.241	1	.624
N of Valid Cases	50		

a. 12 cells (80.0%) have expected count less than 5. The minimum expected count is .06.

Result:

- **Pearson Chi-Square = 16.391**
  - **Degrees of Freedom (df)** = 8
  - **p-value (Asymp. Sig)** = 0.037
  - **Interpretation**: The p-value is 0.037, which is less than the typical significance level of 0.05. This suggests that there is a statistically significant association between Leftover Frequency and Change in Income at the 5% significance level.
- **Likelihood Ratio = 13.284**
  - **Degrees of Freedom (df)** = 8
  - **p-value (Asymp. Sig)** = 0.102
  - **Interpretation**: The p-value of 0.102 is above 0.05, which indicates that the association between Leftover Frequency and Change in Income is not statistically significant according to the Likelihood Ratio test.
- **Linear-by-Linear Association = 0.241**
  - **Degrees of Freedom (df)** = 1
  - **p-value (Asymp. Sig)** = 0.624
  - **Interpretation**: The p-value is 0.624, which is much greater than 0.05. This suggests that there is no significant linear association between Leftover Frequency and Change in Income.

Analysis:

The **Pearson Chi-Square Test** shows a statistically significant association between Leftover Frequency and Change in Income (p = 0.037). However, the **Likelihood Ratio (p = 0.102)** and **Linear-by-Linear Association (p = 0.624)** do not show significant results. This suggests that while there is an overall association between these two variables, there is no clear linear trend, and the significance may not be strong across all models of association.

d) Monthly Income and Savings

H_{04}: There is no association between monthly income and the amount of savings.

Test Applied: Kruskal Wallis Test

Table Used:

Test Statistics[a,b]

	Savings
Chi-Square	7.321
df	2
Asymp. Sig.	.026

a. Kruskal Wallis Test

b. Grouping Variable: MonthlyIncome

Result:

- **Chi-Square** = 7.321
- **Degrees of Freedom (df)** = 2
- **p-value (Asymp. Sig.)** = 0.026

Interpretation:

- The p-value is 0.026, which is less than the typical significance level of 0.05. This suggests that there is a statistically significant difference in savings across the different levels of **Monthly Income** at the 5% significance level.

e) Change in Income and Inventory Diversity, Savings

H_{05}: Variations in income levels have no impact on inventory diversity or the amount of savings.

Test Applied: Kruskal Wallis Test

Table Used:

Test Statistics[a,b]

	Ch. DiverseInventory	Savings
Chi-Square	9.878	16.346
df	4	4
Asymp. Sig.	.043	.003

a. Kruskal Wallis Test

b. Grouping Variable: ChangeinIncome

Result:

- **Chi-Square (Ch. DiverseInventory)** = 9.878
- **Chi-Square (Savings)** = 16.346
- **Degrees of Freedom (df)** = 4
- **p-value (Asymp. Sig.) for Ch. DiverseInventory** = 0.043
- **p-value (Asymp. Sig.) for Savings** = 0.003

Interpretation:

- The **p-value** for Ch. DiverseInventory is 0.043, which is less than the typical significance level of 0.05. This suggests that there is a statistically significant difference in Ch. DiverseInventory across the different levels of **Change in Income** at the 5% significance level.
- The **p-value** for Savings is 0.003, which is also less than 0.05. This suggests a statistically significant difference in **Savings** across the different levels of **Change in Income** at the 5% significance level.

f) Pricing Adjustment and Loans

H_{06}: Adjustments in pricing have no effect on the amount of loans required.

Test Applied: Kruskal Wallis Test

Table Used:

Test Statistics[a,b]

	Loans
Chi-Square	7.583
df	2
Asymp. Sig.	.023

a. Kruskal Wallis Test

b. Grouping Variable: PricingAdjustment

Result:

- **Chi-Square (Loans)** = 7.583
- **Degrees of Freedom (df)** = 2
- **p-value (Asymp. Sig.) for Loans** = 0.023

Interpretation:

- The **p-value** is 0.023, which is less than the typical significance level of 0.05. This suggests that there is a statistically significant difference in **Loans** across the different levels of **Pricing Adjustment** at the 5% significance level.

g) Market Price Fluctuation and Leftover Quantity

H_{07}: Market price fluctuations have no effect on the quantity of leftover stock.

Test Applied: Kruskal Wallis Test

Table Used:

Test Statistics[a,b]

	LeftoverQuantity
Chi-Square	8.903
df	3
Asymp. Sig.	.031

a. Kruskal Wallis Test

b. Grouping Variable: Ch.MktPriceFluctuations

Result:

- **Chi-Square (LeftoverQuantity)** = 8.903
- **Degrees of Freedom (df)** = 3
- **p-value (Asymp. Sig.) for LeftoverQuantity** = 0.031

Interpretation:

- The **p-value** is 0.031, which is less than the typical significance level of 0.05. This suggests that there is a statistically significant difference in **LeftoverQuantity** across the different levels of **Change in Market Price Fluctuations** at the 5% significance level.

h) Spoilage and Years of Experience

H_{08}: There is no association between years of experience and levels of spoilage.

Test Applied: Kruskal Wallis Test

Table Used:

Test Statistics[a,b]

	YearsofExperience
Chi-Square	8.355
df	3
Asymp. Sig.	.039

a. Kruskal Wallis Test

b. Grouping Variable: Ch.Spoilage

Result:

- **Chi-Square (Years of Experience):** 8.355
- **Degrees of Freedom (df):** 3
- **p-value (Asymp. Sig.):** 0.039

Interpretation:

The p-value of 0.039 is below the conventional significance level of 0.05, indicating a statistically significant difference in the years of experience across different levels of Ch. Spoilage at the 5% significance level. This result suggests that the experience levels of individuals are associated with varying degrees of spoilage, potentially indicating that more experienced individuals may handle spoilage differently or face different challenges related to spoilage compared to less experienced individuals.

i) Storage and Inventory Diversity, Multiple Suppliers, Competition, Basic Facilities, Type of Vendors

H_{09}: Storage conditions have no relationship with inventory diversity, the number of suppliers, competition levels, basic facilities, or the type of vendors.

Test Applied: Kruskal Wallis Test

Table Used:

Test Statistics[a,b]

	Multiplesuppliers	Ch. DiverseInventory	Ch. Competition	Ch. BasicFacilities	TypeofVendor
Chi-Square	9.499	10.227	12.767	14.045	13.320
df	4	4	4	4	4
Asymp. Sig.	.050	.037	.012	.007	.010

a. Kruskal Wallis Test

b. Grouping Variable: Ch.Storage

Result:

- **Chi-Square Statistics:**
  - **Multiple Suppliers:** 9.499
  - **Diverse Inventory:** 10.227
  - **Ch. Competition:** 12.767
  - **Ch. Basic Facilities:** 14.045
  - **Type of Vendor:** 13.320
- **Degrees of Freedom (df) for all:** 4
- **p-values (Asymp. Sig.):**
  - **Multiple Suppliers:** 0.050
  - **Diverse Inventory:** 0.037
  - **Ch. Competition:** 0.012
  - **Ch. Basic Facilities:** 0.007
  - **Type of Vendor:** 0.010

Interpretation

The results indicate statistically significant differences across different levels of Ch. Storage for various factors:

- **Multiple Suppliers**: The borderline p-value of 0.050 suggests a potentially significant relationship between the number of suppliers and storage conditions, warranting closer inspection.
- **Diverse Inventory**: With a p-value of 0.037, variations in inventory diversity significantly correlate with how storage is managed.
- **Ch. Competition**: The p-value of 0.012 strongly suggests that the level of competition influences storage practices significantly.
- **Ch. Basic Facilities**: The lowest p-value of 0.007 indicates a very significant impact of basic facilities on storage conditions.

- **Type of Vendor**: With a p-value of 0.010, different types of vendors exhibit significantly different storage practices.

These findings imply that each of these factors—supplier diversity, inventory types, competition levels, facility adequacy, and vendor types—plays a crucial role in storage management, reflecting distinct challenges and strategies in maintaining effective storage systems.

j) Financial Assistance and Compliance, Type of Vendor

H_{010}: Financial assistance has no effect on the frequency of complaints or varies by vendor type.

Test Applied: Kruskal Wallis Test

Table Used:

Test Statistics[a,b]

	Ch. Compliance	TypeofVendor
Chi-Square	10.762	4.728
df	1	1
Asymp. Sig.	.001	.030

a. Kruskal Wallis Test

b. Grouping Variable: Ch.FinancialAssistance

Result:

- **Ch. Compliance:**
  - **Chi-Square:** 10.762
  - **Degrees of Freedom (df):** 1
  - **p-value (Asymp. Sig.):** 0.001
- **Type of Vendor:**
  - **Chi-Square:** 4.728
  - **Degrees of Freedom (df):** 1

- **p-value (Asymp. Sig.):** 0.030

Interpretation

- **Ch. Compliance:**

- The very low p-value of 0.001 suggests a highly significant association between financial assistance and compliance. This indicates that the financial assistance provided may have a strong influence on the compliance levels among recipients, suggesting that those who receive financial aid may be more likely to comply with certain regulations or standards.

- **Type of Vendor:**

- The p-value of 0.030 indicates a significant difference in the types of vendors in relation to the financial assistance they receive. This might reflect that different types of vendors respond differently to financial incentives or assistance, possibly due to varying operational or financial needs.

k) Attracting Customers and Long Working Hours

H_{011}: Long working hours have no effect on the ability to attract more customers.

Test Applied: Kruskal Wallis Test

Table Used:

Test Statistics[a,b]

	Ch. LongWorking Hours
Chi-Square	11.398
df	4
Asymp. Sig.	.022

a. Kruskal Wallis Test

b. Grouping Variable: Ch.AttractingCustomers

Result:

- **Chi-Square:** 11.398

- **Degrees of Freedom (df):** 4
- **p-value (Asymp. Sig.):** 0.022

Interpretation

The p-value of 0.022 indicates a statistically significant difference in long working hours across different strategies for attracting customers at the 5% significance level. This suggests that the methods or strategies vendors use to attract customers are significantly associated with the number of hours they operate.

l) Event Impact and Unpredictable Demand, Leftover Frequency, Change in Income

H_{012}: The impact of events is not related to unpredictable demand, leftover frequency, or changes in income.

Test Applied: Kruskal Wallis Test

Table Used:

Test Statistics[a,b]

	ChangeinIncome	LeftoverFrequency	Ch. Unpredictable Demand
Chi-Square	10.682	12.342	12.376
df	4	4	4
Asymp. Sig.	.030	.015	.015

a. Kruskal Wallis Test

b. Grouping Variable: Eventimpact

Result:

➢ **Change in Income:**

- **Chi-Square:** 10.682
- **Degrees of Freedom (df):** 4
- **p-value (Asymp. Sig.):** 0.030

- **Ch. Leftover Frequency:**
  - **Chi-Square:** 12.342
  - **Degrees of Freedom (df):** 4
  - **p-value (Asymp. Sig.):** 0.015
- **Unpredictable Demand:**
  - **Chi-Square:** 12.376
  - **Degrees of Freedom (df):** 4
  - **p-value (Asymp. Sig.):** 0.015

Interpretation

- **Change in Income:**

- The p-value of 0.030 indicates a significant difference in income changes across varying levels of event impact. This suggests that different types of events can significantly affect income, potentially due to varying customer turnout, sales, or other factors influenced by events.

- **Ch. Leftover Frequency:**

- With a p-value of 0.015, there is a significant association between the frequency of leftovers and event impacts. Events could alter purchasing patterns or customer numbers, leading to different levels of leftover products.

- **Unpredictable Demand:**

- Similarly, the p-value of 0.015 suggests a significant impact of events on the predictability of demand. This finding highlights how events can lead to fluctuations in customer demand, which can be challenging to forecast.

m) Supply Demand Perception and Unpredictable Demand, Leftover Frequency

H_{013}: Effective Supply Demand Perception has no effect on unpredictable demand or the frequency of leftovers.

Test Applied: Kruskal Wallis Test

Table Used:

Test Statistics[a,b]

	Ch. Unpredictable Demand
Chi-Square	10.565
df	4
Asymp. Sig.	.032

a. Kruskal Wallis Test

b. Grouping Variable: SDPerception

Result:

- **Chi-Square:** 10.565
- **Degrees of Freedom (df)**: 4
- **p-value (Asymp. Sig.):** 0.032

Interpretation:

The p-value of 0.032 indicates a statistically significant difference in perceptions of supply and demand across different levels of unpredictable demand at the 5% significance level. This suggests that fluctuations in demand, which may be unpredictable, significantly influence perceptions regarding the balance or mismatch of supply and demand.

n) Age and Supply Demand Perception Effectiveness

H_{014}: Age has no effect on the effectiveness of Supply Demand Perception.

Test Applied: Kruskal Wallis Test

Table Used:

Test Statistics[a,b]

	SDPerception
Chi-Square	8.500
df	3
Asymp. Sig.	.037

a. Kruskal Wallis Test

b. Grouping Variable: Age

Result:

- **Chi-Square:** 8.500
- **Degrees of Freedom (df):** 3
- **p-value (Asymp. Sig.):** 0.037

Interpretation:

The p-value of 0.037 indicates a statistically significant difference in 'SDPerception' across different age groups at the 5% significance level. This suggests that age has a notable impact on how 'SDPerception' is perceived. The significant result implies that the perceptions of supply and demand vary with age, and the differences are not due to random chance.

o) Expense Management and Attracting Customers

H_{015}: There is no correlation between expense management and the ability to attract customers.

Test Applied: Kendall's Tau b Test

Table Used:

Correlations

			Ch. AttractingCustomers	Ch. Expensemgt
Kendall's tau_b	Ch.AttractingCustomers	Correlation Coefficient	1.000	.255*
		Sig. (2-tailed)	.	.045
		N	50	50
	Ch.Expensemgt	Correlation Coefficient	.255*	1.000
		Sig. (2-tailed)	.045	.
		N	50	50

*. Correlation is significant at the 0.05 level (2-tailed).

Result:

- **Correlation Coefficient:** 0.255
- **Significance (Sig. 2-tailed):** 0.045
- **Sample Size (N):** 50

Interpretation:

- **Positive Correlation:** There is a weak positive correlation of 0.255 between the ability to attract customers and expense management. This suggests that as expense management improves, there is a slight tendency for customer attraction to improve as well, or vice versa.
- **Statistical Significance:** Since the p-value (0.045) is less than 0.05, this relationship is statistically significant at the 5% level. This means that there is evidence to suggest that the association between customer attraction and expense management is not due to random chance.

p) Storage Capacity and Supply Demand Impact

H_{016}: There is no correlation between storage capacity and the impact of supply demand fluctuations.

Test Applied: Kendall's Tau b Test

Table Used:

Correlations

			Ch.Storage	sd.impact
Kendall's tau_b	Ch.Storage	Correlation Coefficient	1.000	-.265*
		Sig. (2-tailed)	.	.035
		N	50	50
	sd.impact	Correlation Coefficient	-.265*	1.000
		Sig. (2-tailed)	.035	.
		N	50	50

*. Correlation is significant at the 0.05 level (2-tailed).

Result:

- **Correlation Coefficient:** -0.265
- **Significance (Sig. 2-tailed):** 0.035
- **Sample Size (N):** 50

Interpretation:

- **Negative Correlation:** There is a weak negative correlation of -0.265 between "Ch. Storage" and "sd. impact". This suggests that as storage changes, the impact on "sd" decreases slightly, or vice versa.
- **Statistical Significance:** Since the p-value (0.035) is less than 0.05, this relationship is statistically significant at the 5% level. This means that the association between storage and its impact on "sd" is unlikely to be due to random chance.

q) Changes in Income and Event Impact

H_{017}: There is no correlation between changes in income and event impact.

Test Applied: Kendall's Tau b Test

Table Used:

Correlations

			ChangeinIncome	Eventimpact
Kendall's tau_b	ChangeinIncome	Correlation Coefficient	1.000	-.366**
		Sig. (2-tailed)	.	.002
		N	50	50
	Eventimpact	Correlation Coefficient	-.366**	1.000
		Sig. (2-tailed)	.002	.
		N	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

Result:

- **Correlation Coefficient:** -0.366
- **Significance (Sig. 2-tailed):** 0.002
- **Sample Size (N):** 50

Interpretation:

- **Negative Correlation:** There is a moderate negative correlation of -0.366 between "Change in Income" and "Event Impact". This suggests that as changes in income increase, the impact of events decreases, or vice versa.
- **Statistical Significance:** Since the p-value (0.002) is less than 0.01, this relationship is statistically significant at the 1% level. This indicates that the association between income change and event impact is unlikely to be due to random chance.

r) Market Price Fluctuations and Leftover Frequency

H_{018}: There is no correlation between market price fluctuations and leftover frequency.

Test Applied: Kendall's Tau b Test

Table Used:

Correlations

			LeftoverFrequency	Ch. MktPriceFluctuations
Kendall's tau_b	LeftoverFrequency	Correlation Coefficient	1.000	.134
		Sig. (2-tailed)	.	.308
		N	50	50
	Ch.MktPriceFluctuations	Correlation Coefficient	.134	1.000
		Sig. (2-tailed)	.308	.
		N	50	50

Result:

- **Correlation Coefficient**: 0.134
- **Significance (Sig. 2-tailed)**: 0.308
- **Sample Size (N)**: 50

Interpretation:

- **Weak Positive Correlation**: There is a very weak positive correlation of 0.134 between "Leftover Frequency" and "Change in Market Price Fluctuations." This indicates that as leftover frequency increases, market price fluctuations may also increase slightly, but the relationship is minimal.
- **Statistical Significance**: Since the p-value (0.308) is greater than 0.05, this relationship is **not statistically significant**. This suggests that the observed correlation could be due to random chance, and there is no strong evidence of a meaningful association between leftover frequency and market price fluctuations.

s) Sourcing Difficulties and Inventory Diversity

H_{019}: There is no correlation between sourcing difficulties and inventory diversity.

Test Applied: Kendall's Tau b Test

Table Used:

Correlations

			Ch.Sourcing	Ch. DiverseInventory
Kendall's tau_b	Ch.Sourcing	Correlation Coefficient	1.000	.227
		Sig. (2-tailed)	.	.080
		N	50	50
	Ch.DiverseInventory	Correlation Coefficient	.227	1.000
		Sig. (2-tailed)	.080	.
		N	50	50

Result:

- **Correlation Coefficient**: 0.227
- **Significance (Sig. 2-tailed)**: 0.080
- **Sample Size (N)**: 50

Interpretation:

- **Weak Positive Correlation**: There is a weak positive correlation of 0.227 between "Change in Sourcing" and "Change in Diverse Inventory." This suggests that as changes in sourcing practices occur, there is a slight tendency for inventory diversity to increase, or vice versa.
- **Statistical Significance**: Since the p-value (0.080) is greater than 0.05, this relationship is **not statistically significant**. This means that the correlation might be due to random chance, and there is no strong evidence of a meaningful association between sourcing changes and inventory diversity. However, the result is close to the significance threshold, suggesting a potential trend that might be worth further exploration with a larger sample size.

t) Years of Experience and Leftover Quantity

H_{020}: There is no correlation between years of experience and leftover quantity.

Test Applied: Kendall’s Tau b Test

Table Used:

Correlations

			YearsofExperience	LeftoverQuantity
Kendall's tau_b	YearsofExperience	Correlation Coefficient	1.000	.219
		Sig. (2-tailed)	.	.093
		N	50	50
	LeftoverQuantity	Correlation Coefficient	.219	1.000
		Sig. (2-tailed)	.093	.
		N	50	50

Result:

- **Correlation Coefficient**: 0.219
- **Significance (Sig. 2-tailed)**: 0.093
- **Sample Size (N)**: 50

Interpretation:

- **Weak Positive Correlation**: There is a weak positive correlation of 0.219 between "Years of Experience" and "Leftover Quantity." This suggests that as the years of experience increase, there may be a slight tendency for leftover quantities to increase, or vice versa.
- **Statistical Significance**: Since the p-value (0.093) is greater than 0.05, this relationship is **not statistically significant**. This indicates that the observed correlation could be due to random chance, and there is no strong evidence of a meaningful association between years of experience and leftover quantity. However, the result is close to significance, suggesting a possible trend that could be explored further with more data.

u) Financial Assistance and Spoilage

H_{021}: There is no correlation between financial assistance and the ability to manage spoilage.

Test Applied: Kendall’s Tau b Test

Table Used:

Correlations

			Ch. FinancialAssistance	Ch.Spoilage
Kendall's tau_b	Ch.FinancialAssistance	Correlation Coefficient	1.000	-.083
		Sig. (2-tailed)	.	.539
		N	50	50
	Ch.Spoilage	Correlation Coefficient	-.083	1.000
		Sig. (2-tailed)	.539	.
		N	50	50

Result:

- **Correlation Coefficient**: -0.083
- **Significance (Sig. 2-tailed)**: 0.539
- **Sample Size (N)**: 50

Interpretation:

- **Weak Negative Correlation**: There is a very weak negative correlation of -0.083 between "Change in Financial Assistance" and "Change in Spoilage." This suggests that as financial assistance increases, spoilage might decrease slightly, but the relationship is minimal.
- **Statistical Significance**: Since the p-value (0.539) is much greater than 0.05, this relationship is **not statistically significant**. This means that the observed correlation could be due to random chance, and there is no strong evidence of a meaningful association between changes in financial assistance and spoilage.

v) SupplyDemand Perception and Market Price Fluctuations

H_{022}: There is no correlation between supplydemand perception and market price fluctuations.

Test Applied: Kendall's Tau b Test

Table Used:

Correlations

			Ch. MktPriceFluctuations	SDPerception
Kendall's tau_b	Ch.MktPriceFluctuations	Correlation Coefficient	1.000	-.252*
		Sig. (2-tailed)	.	.042
		N	50	50
	SDPerception	Correlation Coefficient	-.252*	1.000
		Sig. (2-tailed)	.042	.
		N	50	50

*. Correlation is significant at the 0.05 level (2-tailed).

Result:

- **Correlation Coefficient**: -0.252
- **Significance (Sig. 2-tailed)**: 0.042
- **Sample Size (N)**: 50

Interpretation:

- **Weak Negative Correlation**: There is a weak negative correlation of -0.252 between "Change in Market Price Fluctuations" and "SD Perception." This suggests that as market price fluctuations increase, the perception of SD (possibly sustainable development or something similar) tends to decrease slightly, or vice versa.
- **Statistical Significance**: Since the p-value (0.042) is less than 0.05, this relationship is **statistically significant** at the 5% level. This indicates that the association between market price fluctuations and SD perception is unlikely to be due to random chance and shows a meaningful, though weak, inverse relationship.

w) Transportation and Inventory Diversity

H_{023}: There is no correlation between transportation logistics and inventory diversity.

Test Applied: Kendall’s Tau b Test

Table Used:

Correlations

			Ch.Transport	Ch. DiverseInventory
Kendall's tau_b	Ch.Transport	Correlation Coefficient	1.000	.358**
		Sig. (2-tailed)	.	.006
		N	50	50
	Ch.DiverseInventory	Correlation Coefficient	.358**	1.000
		Sig. (2-tailed)	.006	.
		N	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

Result:

- **Correlation Coefficient**: 0.358
- **Significance (Sig. 2-tailed)**: 0.006
- **Sample Size (N)**: 50

Interpretation:

- **Moderate Positive Correlation**: There is a moderate positive correlation of 0.358 between "Change in Transport" and "Change in Diverse Inventory." This suggests that as changes in transportation occur, there is a moderate tendency for inventory diversity to increase, or vice versa.
- **Statistical Significance**: Since the p-value (0.006) is less than 0.01, this relationship is **statistically significant** at the 1% level. This indicates that the association between transportation changes and inventory diversity is unlikely to be due to random chance, and there is evidence of a meaningful positive relationship between these two variables.

x) Compliance and Financial Assistance

H_{024}: There is no correlation between compliance and financial assistance.

Test Applied: Kendall's Tau b Test

Table Used:

Correlations

			Ch. FinancialAssistance	Ch. Compliance
Kendall's tau_b	Ch.FinancialAssistance	Correlation Coefficient	1.000	.466**
		Sig. (2-tailed)	.	.001
		N	50	50
	Ch.Compliance	Correlation Coefficient	.466**	1.000
		Sig. (2-tailed)	.001	.
		N	50	50

**. Correlation is significant at the 0.01 level (2-tailed).

Result:

- **Correlation Coefficient**: 0.466
- **Significance (Sig. 2-tailed)**: 0.001
- **Sample Size (N)**: 50

Interpretation:

- **Moderate Positive Correlation**: There is a moderate positive correlation of 0.466 between "Change in Financial Assistance" and "Change in Compliance." This suggests that as financial assistance increases, compliance also tends to improve, or vice versa.
- **Statistical Significance**: Since the p-value (0.001) is less than 0.01, this relationship is **statistically significant** at the 1% level. This indicates that the association between changes in financial assistance and compliance is unlikely to be due to random chance, and there is strong evidence of a meaningful positive relationship between these two variables.

CHAPTER 5

CONCLUSION

The analysis of the economic conditions and challenges faced by urban vegetable vendors in Jammu City has revealed key insights into their operations. The study found that vendors face numerous challenges, including unstable income, market price fluctuations, competition, and spoilage due to inadequate storage. The results from the normality tests indicated that most of the variables were not normally distributed, prompting the use of non-parametric tests for further evaluation.

Significant relationships were identified between variables such as **years of experience**, **pricing methods**, **leftover management**, and **event impacts**. These factors have a notable influence on the vendors' income and overall business sustainability. The study also highlighted that **financial assistance** and **access to better infrastructure** could play a major role in improving vendors' livelihoods.

In conclusion, while the vendors have demonstrated resilience and adaptability, there are clear areas where targeted interventions can make a significant difference in their operational efficiency and profitability. Addressing these areas will not only enhance the vendors' economic standing but also contribute to the overall food security and urban economy of Jammu.

CHAPTER 6

RECOMMENDATIONS

Based on the findings from the analysis, the following recommendations are proposed to improve the conditions and sustainability of urban vegetable vendors in Jammu City:

1. **Training and Capacity Building**:

- Implement training programs to enhance vendors' skills in financial management, inventory control, and effective pricing strategies. This can help them optimize their business operations and increase profitability.

2. **Storage Infrastructure**:

- Provide vendors with access to affordable and efficient storage facilities. This will help reduce losses from spoilage, especially during periods of market fluctuations or unfavorable weather conditions.

3. **Financial Assistance and Credit Access**:

- Expand access to micro-loans and financial assistance programs like **PM SVANidhi**. This can help vendors invest in better tools, transportation, and infrastructure to improve their business efficiency.

4. **Digital Platforms and Technology Integration**:

- Encourage the use of mobile apps and online platforms to connect vendors directly with consumers. This would reduce dependency on middlemen, increase profit margins, and provide better market access.

5. **Waste Reduction and Leftover Management**:

- Promote initiatives for better utilization of leftover vegetables, such as partnerships with local NGOs for redistribution or repurposing excess produce. This will reduce waste and contribute to food security.

6. **Legal and Regulatory Support**:

- Streamline the process for obtaining vendor licenses and legalize street vending through local government interventions. This will help create a more supportive business environment for vendors and reduce the risks associated with informal operations.

By focusing on these key areas, the vendors' economic resilience can be enhanced, leading to a more sustainable urban economy and improved livelihoods for these crucial contributors to the food supply chain.

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ANNEXURE

Interview Schedule
Title of the study: Street level Agriculture
Investigating the economics of Urban vegetable vendors of Jammu city

SECTION 1: *Socio-economic background*

1) Name- _____

2) Age (in years)-

i. Up-to 30
ii. 31-40
iii. 41-50
iv. 51 and above

3) Gender-

i. Male
ii. Female
iii. Others

4) Marital status-

i. Married
ii. Unmarried
iii. Widowed
iv. Divorced

5) Literacy rate-

i. No formal education
ii. Primary school
iii. Secondary school (up-to 10^{th})
iv. High secondary school (12^{th})
v. Some college/vocational training
vi. UG Degree
vii. PG Degree

6) No. of family members -

i. 1-2
ii. 3-4
iii. 5-6
iv. More than 6

7) Place of residence-

- Present place of residence- _____
- Permanent place of residence-_____

8) Type of residence-

i. Owned house/apartment
ii. Rented house/apartment
iii. Shared living arrangement
iv. Others

1

9) Type of vendor-

i. Street vendors
ii. Temporary Market stall vendors
iii. Permanent shop vendors
iv. Mobile vendors

10) Source of income-

a) Is selling vegetables your only source of income?
   i. Yes
   ii. No
b) If no, what other sources do you have?
   - _____

11) Monthly income-

i. Less than 5,000
ii. 5,000-10,000
iii. 10,001-15,000
iv. 15,001-20,000
v. More than 20,000

12) Years of experience -

i. 0-5 years
ii. 5-10 years
iii. 10-15 years
iv. 16 and above

13) Area of distribution -_____

SECTION 2: *Economics of Urban Vegetable Vendors*

14) Types of vegetables you sell-

i. Summer season vegetables
ii. Winter season vegetables
iii. Both
iv. Others (specify)

15) To whom do you sell your vegetables?

i. Individual households
ii. Restaurants and cafes
iii. Local shops and grocery shops
iv. Other(specify)

16) Do you notice any seasonal variations in the demand for specific vegetables?

i. Yes
ii. No

17) If yes, please specify the reason- _____

18) How do you gauge customer preferences and adapt your stock accordingly?

i. Customer feedback
ii. Sales data analysis
iii. Observation
iv. Other (please specify)

19) What factors influence customer demand for vegetables?

i. Price
ii. Quality
iii. Variety
iv. Seasonality
v. Other (specify)

20) How do you determine the prices of your vegetables?

i. Market rates
ii. Cost of production
iii. Competition in the area
iv. Customer demand

21) What strategies do you employ to differentiate your vegetable offerings from competitors?

i. Diverse product selection
ii. Competitive pricing
iii. High-quality produce
iv. Unique promotions or discounts

22) In what ways do you adapt your approach during peak competition times, such as local events or festivals?

i. Adjust pricing
ii. Offer special promotions
iii. Enhance customer service (home-delivery etc)
iv. Other (specify)

23) How significantly do holidays, festivals, or special events impact the overall demand for vegetables in your business?

i. Not at all
ii. Slightly
iii. Moderately
iv. Significantly
v. Very significantly

24) From whom do you buy your vegetables?

i. From farm direct
ii. From wholesale
iii. Grow yourself and sell
iv. From local market
v. Others (specify)

25) Do you use multiple suppliers?

i. Yes
ii. No

26) if yes, please specify state reason -_____

27) Frequency of supply-

i. Daily
ii. Weekly
iii. Bi-weekly
iv. Other (specify)

28) What are your main criteria for choosing a vegetable supplier? (choose all that apply)

i. Price
ii. Quality
iii. Reliability
iv. Variety
v. Proximity to your vending location
vi. Relationship with the vendor

29) How do you transport your vegetables to your selling location?

i. Handcarts
ii. Motorcycles/scooters
iii. Vans/mini trucks
iv. Trucks

30) Do you engage in any cooperative arrangements with other vendors to collectively source vegetables?

i. Yes
ii. No
iii. Not applicable

31) How often do you explore alternative sources for vegetable procurement?

i. Rarely
ii. Occasionally
iii. Frequently

32) Are there specific seasons or times of the year when you rely more on certain sources for your vegetables?

i. Strongly agree
ii. Agree
iii. Neutral
iv. Disagree
v. Strongly disagree

33) If yes, please specify the seasons or times of the year when you rely more on certain sources- _____

34) Do you feel there is a good balance between supply and demand in the vegetable market?

i. Strongly agree

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ii. Agree
iii. Neutral
iv. Disagree
v. Strongly disagree

35) How do fluctuations in demand and supply affect your profit margins?

i. Significantly
ii. Moderately
iii. Not much

36) Do you find it necessary to adjust your pricing based on demand and supply fluctuations?

i. Always
ii. Sometimes
iii. Rarely

37) Do you maintain a separate budget for personal expenses and business expenses?

i. Yes
ii. No

38). How often do you face challenges in managing your business expenses within your budget?

i. Rarely
ii. Occasionally
iii. Frequently

39) Is some part of your income allocated to savings or emergency funds for your business?

i. Yes
ii. No

40) Have you ever accessed financial assistance or loans to support your vegetable vending business?

i. Yes
ii. No

41) If yes, how satisfied are you with the financial assistance or loan arrangements?

i. Very satisfied
ii. Satisfied
iii. Neutral
iv. Dissatisfied
v. Very dissatisfied

42) How has your income from vegetable vending changed over the past year?

i. Increased significantly
ii. Increased moderately
iii. Remained stable
iv. Decreased moderately
v. Decreased significantly

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SECTION 3: *Utilization of Leftover vegetable*

43) Do some of your vegetables remain unsold?

i. Yes
ii. No
iii. occasionally

44) If occasionally, then how often your vegetables remain unsold?

i. Daily
ii. Several times a week
iii. Once a week
iv. Once a month
v. Others(specify)

45) Quantity (in kg) of leftover vegetables: -

i. Less than 5 kg
ii. Between 5 to 10 kg
iii. More than 10 kg

46) Is quantity of your leftover vegetables more than you sell?

i. Yes
ii. No
iii. Sometimes

47) if Yes, What is the reason for that?

i. Quality of the vegetables
ii. Price of the vegetables
iii. Demand of the vegetables
iv. Others (specify)

48) What do you do with your leftover vegetables? :-

i. Keep for self-consumption
ii. Keep for the next day
iii. Give it to relatives or friends
iv. Give it to domestic animals (cows etc)
v. Provide/distribute it to entities (like charities, local communities etc)
vi. Others(specify)

49)[if you have selected the 5th option in the above question then],Do you distribute the vegetables for free?

i. Yes
ii. No
iii. Depends on the situation
iv. Others(specify)

50) If no, How much do you earn from it? :-

Mention amount yourself: _____

51) Is your earning from distribution more than your actual earning?

i. Yes
ii. No
iii. Sometimes

52) Up to how many days can a bunch of vegetables last before it becomes non-consumable?

i. 1-2
ii. 2-3
iii. 3-4
iv. More than 4

53) What do you do with non-consumable vegetables?

i. Throw away
ii. Feed to animals
iii. Composting
iv. Other(specify)

SECTION 4: *Challenges*

54) Rate the following challenges faced by vegetable vendors.

CHALLENGES	Not at all	slightly	Moderately	Significantly	Very significantly
Sourcing and inventory					
Fluctuations in market prices					
Spoilage and wastage of produce					
Difficulties with storage					
Difficulties with transport					
Unpredictable customer demand					
Maintaining diverse inventory					
Sales and Competition					
Long working hours and physical demand of the job					
Regulatory compliance burden					
Limited access to financial services and loans					
Unfavourable weather conditions					
Difficulty attracting and retaining customers					
Lack of basic facilities(toilets)					

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