

Price hike throughout consumer's product supply chain layers: An investigation of the Rajshahi mango market

Sharmin Suraiya Shanta, Afridi Hasan Bappi, Redoy Kumer Karmokar

University of Rajshahi

Abstract

In the context of Bangladesh, the increase in the price of daily necessities harms people's lifestyles. Although mango is a seasonal fruit, it is in demand all over Bangladesh. Apart from daily necessities, the prices of mangoes have also increased this year compared to last year. The commodity price hike is not a new issue. We are here mainly trying to assess the relationship between mango price hikes in the supply chain of daily necessities. The purpose of this study is to gain a better understanding of the key factors contributing to price hikes at various stages of the supply chain in the Rajshahi mango market, and how these price changes affect lifestyle, feelings and adaptation strategies. We collected primary data from randomly selected informants by applying the survey method. To conduct this study we have used various articles as secondary data which are taken from valid databases. We have completed this research through quantitative research methods to use our research. Based on the data, it can be said that the increase in the price of mangoes due to supply drag has a significant negative impact on public life. Which harms their food security as well as their economic and personal life. The findings provide valuable insights into the inefficiencies and challenges within the supply chain, offering potential strategies for stabilizing prices and ensuring fairer pricing for both producers and consumers. This study contributes to the broader understanding of agricultural economics and the complexities of mango supply chains in developing regions.

Keywords: *Price hike, Supply-chain, Mango-market, Consumer products*

Introduction

The term "supply chain" refers to the interconnected functions that constitute the production and distribution of a good or service. Everything that happens between the supplier delivering raw materials to the manufacturer and the manufacturer delivering finished goods to the consumer is part of the supply chain. The term "supply chain management" (SCM) refers to the practice of coordinating the flow of resources from their origin to their final destination. The product flow, the information flow, and the financial flow are the three primary branches that constitute the supply chain (Anam et al., 2023). These things happen during the strategy, planning, and operation phases. Supply chain management entails managing and organising such flows across businesses. The processes of material, financial, and information flow must be coordinated and synced with activities. This is what we found out about mango price hikes throughout consumer product supply chain layers. To better understand how price increases affect different stages of the supply chain for consumer goods, the Rajshahi mango market is an excellent case study. One of the most important agricultural products in Bangladesh is mangoes, which are consumed almost daily and grown in abundance within and outside of the Rajshahi region. Since changes in this market's prices impact both buyers and sellers, it's crucial to understand how they operate. Price increases that may be generated by the rest of the supply chain have the greatest impact on consumers, as this article indicates (Asha et al., 2022). As an example, people often visit the market to purchase mangoes. However, the consumer just cannot afford such excessive costs for these things. This price increase can have consequences for the rest of the supply chain. Imagine a scenario where a supplier provides mango at a high rate, a manufacturer receives a low quantity, or a retailer chooses to keep up and provide a low quantity to the store, resulting in a planned price increase (Dey et al., 2023). Consequently, market prices keep going up because demand exceeds supply. This paper aims to investigate the Rajshahi mango market and shows that prices are going up through the consumer product supply chain. The objectives of the paper are: To find out how retailers and customers feel about price increases across all market products mango, to figure out why prices increased up, To find out about the price increase and how it affects the ability to buy along the supply chain, and To figure out the methods for adapting.

Literature Review

With a total output of 2.5 million metric tons in 2020-21, mangoes are undoubtedly the most significant fruit in Bangladesh. Many people consider the Rajshahi area to be the "Mango Capital of Bangladesh" because of its abundance of mango trees (Amin, 2015). However, there are several reasons at different points in the supply chain that result in prices for mangoes and other consumer goods rising frequently, which is undesirable for customers. The purpose of this paper is to outline all of the connections in the mango supply chain in Bangladesh, with a particular emphasis on the Rajshahi market, and to determine what variables are causing price increases at each level of the chain.

2.1 Mango supply chain in Bangladesh

Manufacturers, middlemen, distributors, retailers, and customers are every component in the Bangladeshi mango supply chain. There are several steps in the supply chain, including:

- **Manufacturing:** The Rajshahi area is the country's mango-producing centre, where the majority of mangoes are farmed.
- **Collecting and caring for mangoes after harvest:** Mangoes must be harvested and handled correctly subsequently to keep their quality and minimize wastage (Amwoka, 2021). Problems with quality and losses might occur as a result of late harvesting, improper handling, and insufficient utilization of inputs.
- **Logistics and transportation:** Mangoes are moved from their places of origin to places of consumption across the country. Problems with transportation, such as extortion, poor road conditions, and expensive prices, can affect the supply chain.
- **Retail and Wholesale:** The distribution of mangoes to customers is greatly influenced by wholesalers and retailers (Rahman et al., 2023). Customers may see price increases as a result of price changes and supply limitations throughout these times.

2.2 The causes of price hikes

Several variables in the mango supply chain might cause prices to rise:

- **Problems with the relationship with Supply:** Mangoes can be expensive during the off-season due to supply difficulties caused by seasonal changes in output and limited storage facilities (Amwoka 2021).

- **Ineffective chain of production:** Inefficiency in the supply chain can impact prices due to factors such as inadequate facilities, a lack of cooperation among customers, and data imbalance.
- **Practices engaging in Monopoly:** To increase prices, suppliers and distributors may resort to monopoly techniques such as warehousing or making things seem scarcer than they are.
- **Growing expenses:** A rise in the cost of goods, transportation, and other services used in the supply chain can lead to an increase in consumer pricing.
- **Purchasing patterns:** Mango pricing can be influenced by the willingness of customers to pay more for secure and high-quality mangoes.

2.3 Effects of price hikes

An increase in mango supply chain prices can affect many parties:

- **Customers:** People, particularly those with cheaper incomes, may find it more difficult to purchase mangoes if their costs go up.
- **Manufacturers:** Although manufacturers may see a temporary increase in profits from higher prices, these levels of pricing have a chance to diminish demand and perhaps cause losses down the road (Nagle & Müller, 2017).
- **Growth in the economy:** Mangoes are only one example of how consumer price increases can have a detrimental effect on GDP and people's standard of living.

2.4 Methods for Adjusting

Several adaption measures can be implemented to lessen the impact of price spikes and guarantee a steady supply of mangoes at acceptable prices:

- **Boosting the effectiveness of the Supply Chain:** If the supply chain is to be made more efficient, investments in warehouses, technology, and facilities are necessary.
- **Advancement of collaborative structures:** Producers can acquire more leverage in price negotiations and market access disputes if they join together in a producer cooperative.
- **Marketing and advertising:** Mangoes can be branded and promoted as a nutritious and risk-free fruit to boost demand at home and keep prices steady (Keraita & Drechsel, 2015). To stabilize pricing and minimize the impact of changes in local supply and demand, it is a good idea to diversify markets by investigating export options.

- **The role of the government:** Stabilizing prices and safeguarding producer and consumer values are both possible outcomes of well-designed government programs including price control, assistance, and intervention in the market.

Several barriers lead to price increases across the various levels of the Bangladeshi mango supply chain, especially in the Rajshahi region. All parties involved, both public and private, must work together to find solutions to these problems. To stabilize the mango supply and keep prices acceptable, it is important to improve supply chain efficiency, encourage collaborative development, marketing and advertising, investigate export options, and execute suitable government interventions (Kiloes et al., 2023). These measures can help reduce the impact of price hikes.

Methodology

3.1 Introduction

This study employs a quantitative research design, to primarily collect quantitative data through a survey. This study takes a phenomenological research strategy, which is "a design of inquiry coming from philosophy and psychology in which the researcher describes the lived experiences of individuals about a phenomenon "

3.2 Source of information

Both primary and secondary sources of data are needed. The survey approach is used to collect primary data, and existing literature that is pertinent to the study is evaluated to provide secondary data.

3.3 Field setting

This research is designed to explore the Price hike throughout consumer's product supply chain layers in Rajshahi. Since Rajshahi is a renowned city in Bangladesh, therefore it has been selected as the study area. To reach the young urbanites, the research field is specified within the University of Rajshahi campus where young students (both male and female) are studying for a long time with temporary residence in university halls.

3.4 Participants' category

The participants of this study which is situated in Rajshahi City Bangladesh. To get a gender-balanced perspective, both the male (50) and female (35) participants are included as participants in this research. Following *random sampling*, a sample size of 85 participants is

determined for this study. The age range of the participants is from under 18 to 35 years old. this research solely focuses on the specific category of participants in the urban context.

3.5 Data collection

Our main data was gathered from a wide range of sources, retailers, wholesalers, and customers. For informed customers, we use Google Forms; for others, we do offline polls using questionnaires. Apart from that, we gather secondary data from reputable news portals, pertinent authorities, and other sources for our study.

3.6 Data analysis

A methodical strategy is employed to determine a suitable, rational, and agreeable outcome. Data is first gathered from primary and secondary sources, and then it is thoroughly analyzed using a variety of statistical techniques, including SPSS. We employed a mixed data approach, incorporating quantitative, to obtain a comprehensive understanding of the public sentiment surrounding the price increase.

To collect primary data for the study, a physical survey and an online survey through a structured questionnaire were used. We estimate the probability by utilizing SPSS for statistical data analyses, including Frequency tests, and regression analyses. These techniques will aid in comprehending the goals of our research.

3.7 Ethical consideration

Interviews are conducted with each participant's prior consent and in places of their convenience. No real names of the participants and of the people they mention are used in the report.

Findings and Results

4.1 Perception and feelings

In the mango supply chain, the roles of different participants can be understood through the following percentages, which represent their influence or share in the overall system:

What is your role in the mango supply chain (overall everyone)

	Frequency	Per cent	Valid Percent	Cumulative Percent
Consumer	69	81.2	81.2	81.2

Wholesaler	5	5.9	5.9	87.1
Supplier	6	7.1	7.1	94.1
Farmer	5	5.9	5.9	100.0
Total	85	100.0	100.0	

- **Consumers (81.2%):** Consumers play the most significant role in the supply chain. Their demand drives the entire system, influencing how much mangoes are produced, supplied, and distributed. As end-users, their preferences and purchasing power dictate the market trends and the volume of mangoes needed.
- **Wholesalers (5.9%):** Wholesalers contribute by bridging the gap between suppliers and retailers. They are responsible for buying mangoes in bulk and distributing them to retail outlets. While their percentage is relatively smaller, they are crucial for managing inventory and ensuring the smooth flow of mangoes from suppliers to the market.
- **Suppliers (7.1%):** Suppliers manage moving mangoes from farms to wholesalers. They handle transportation, storage, and initial processing. Their role is vital for maintaining the quality and timely delivery of mangoes but represents a smaller percentage than consumer demand.
- **Farmers (5.9%):** Farmers are the foundation of the supply chain, growing and harvesting mangoes. Though their percentage is similar to that of wholesalers, their role is fundamental, as the quality and quantity of mangoes depend on their agricultural practices.

Have you noticed a price increase in mangoes over the last 1- 5 years?

	Frequenc y	Percent	Valid Percent	Cumulative Percent
Yes	81	95.3	95.3	95.3
Valid No	4	4.7	4.7	100.0
Total	85	100.0	100.0	

- Based on the survey data, 95.3% of respondents have noticed a price increase in mangoes over the last 1-5 years, while 4.7% have not observed such an increase. This

yes, by approximately what percentage has the price increased?

	Frequency	Percent	Valid Percent	Cumulative Percent
Less than 10%	5	5.9	6.1	6.1
10-20%	18	21.2	22.0	28.0
21-30%	18	21.2	22.0	50.0
Valid 31-40%	14	16.5	17.1	67.1
41-50%	13	15.3	15.9	82.9
More than 50%	14	16.5	17.1	100.0
Total	82	96.5	100.0	
Missing System	3	3.5		
Total	85	100.0		

indicates that most people have experienced or observed rising costs for mangoes in recent years.

4.2 Consumer

What is your role in the mango supply chain * Have you noticed a price increase in mangoes over the last 1- 5 years?

	Have you noticed a price increase in mangoes over the last 1- 5 years?		Total
	Yes	No	
What is your role in the mango supply chain Consumer	67	2	69
Total	67	2	69

What is your role in the mango supply chain * If yes, by approximately what percentage has the price increased?

	If yes, by approximately what percentage has the price increased?						Total
	Less than 10%	10-20%	21-30%	31-40%	41-50%	More than 50%	
What is your role in the mango supply chain Consumer	5	16	9	14	11	12	67
Total	5	16	9	14	11	12	67

4.3 Wholesaler

What is your role in the mango supply chain * Have you noticed a price increase in mangoes over the last 1- 5 years?

	Have you noticed a price increase in mangoes over the last 1- 5 years?	Total
	Yes	
What is your role in the mango supply chain Wholesaler	5	5
Total	5	5

What is your role in the mango supply chain * If yes, by approximately what percentage has the price increased?

	If yes, by approximately what percentage has the price increased?	Total

	10-20%	21-30%	41-50%	
What is your role in the mango supply chain Wholesaler	1	2	2	5
Total	1	2	2	5

4.4 Supplier

What is your role in the mango supply chain * Have you noticed a price increase in mangoes over the last 1- 5 years?

	Have you noticed a price increase in mangoes over the last 1- 5 years?	Total
	Yes	
What is your role in the mango supply chain Supplier	6	6
Total	6	6

What is your role in the mango supply chain *If yes, by approximately what percentage has the price increased?

	If yes, by approximately what percentage has the price increased?			Total
	10-20%	21-30%	More than 50%	
What is your role in the mango supply chain Supplier	1	3	2	6
Total	1	3	2	6

4.5 Farmer

What is your role in the mango supply chain * Have you noticed a price increase in mangoes over the last 1- 5 years?

	Have you noticed a price increase in mangoes over the last 1- 5 years?		Total
	Yes	No	
What is your role in the mango supply chain Farmer	4	1	5
Total	4	1	5

What is your role in the mango supply chain If yes, by approximately what percentage has the price increased?

	If yes, by approximately what percentage has the price increased?	Total
	21-30%	
What is your role in the mango supply chain Farmer	4	4
Total	4	4

4.6 Based on gender

Gender If yes, by approximately what percentage has the price increased?

	If yes, by approximately what percentage has the price increased?						Total
	Less than 10%	10-20%	21-30%	31-40%	41-50%	More than 50%	
Male	3	12	8	8	11	7	49

Gender	Female	2	6	10	6	2	7	33
Total		5	18	18	14	13	14	82

Gender * Have you noticed a price increase in mangoes over the last 1- 5 years?

		Have you noticed a price increase in mangoes over the last 1- 5 years?		Total
		Yes	No	
Gender	Male	49	1	50
	Female	33	2	35
Total		82	3	85

Reasons for price hike

What are the main factors contributing to the price hike of mangoes?

	Frequency	Percent	Valid Percent	Cumulative Percent
Increased production costs	16	18.8	18.8	18.8
Higher transportation costs	13	15.3	15.3	34.1
Increased demand	11	12.9	12.9	47.1
Limited supply	25	29.4	29.4	76.5
Market monopolies	12	14.1	14.1	90.6
Export demand	8	9.4	9.4	100.0
Total	85	100.0	100.0	

The recent price hike in mangoes can be attributed to several key factors:

- **Limited Supply (29.4%):** The most significant factor is the restricted supply of mangoes. Seasonal variations, adverse weather conditions, and agricultural challenges have reduced the quantity of mangoes available in the market.
- **Increased Production Costs (18.8%):** Rising expenses for labour, fertilizers, and other inputs necessary for mango cultivation have driven up production costs.
- **Higher Transportation Costs (15.3%):** Increased fuel prices and logistical challenges have elevated the cost of transporting mangoes from farms to markets.
- **Market Monopolies (14.1%):** Market consolidation and monopolistic practices among major distributors can lead to higher prices due to reduced competition and increased control over supply chains.
- **Increased Demand (12.9%):** A growing demand for mangoes, possibly driven by rising popularity and consumption, has pushed prices up as buyers compete for the available supply.
- **Export Demand (9.4%):** Higher demand for mangoes in international markets has further strained domestic supply, contributing to the overall price increase.

Do you agree that the price hike of mangoes is created because of man-made events or reasons?

	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly disagree	4	4.7	4.7	4.7
Disagree	10	11.8	11.8	16.5
Neutral	27	31.8	31.8	48.2

Agree	37	43.5	43.5	91.8
Strongly agree	7	8.2	8.2	100.0
Total	85	100.0	100.0	

Have there been any disruptions in your supply chain this year (2024) to purchase mango?

	Frequency	Percent	Valid Percent	Cumulative Percent
Natural disasters	22	25.9	25.9	25.9
Valid Transportation	11	12.9	12.9	38.8
Price hike	52	61.2	61.2	100.0
Total	85	100.0	100.0	

5.1 Based on gender

Gender * What are the main factors contributing to the price hike of mangoes?

		What are the main factors contributing to the price hike of mangoes?						Total
		Increased production costs	Higher transportation costs	Increased demand	Limited supply	Market monopolies	Export demand	
Gender	Male	10	8	6	17	4	5	50
	Female	6	5	5	8	8	3	35
Total		16	13	11	25	12	8	85

Gender * Do you agree that the price hike of mangoes is created because of man-made events or reasons?

		Do you agree that the price hike of mangoes is created because of man-made events or reasons?					Total
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
Gender	Male	3	7	17	19	4	50
	Female	1	3	10	18	3	35
Total		4	10	27	37	7	85

Gender * Have there been any disruptions in your supply chain this year (2024) to purchase mango?

		Have there been any disruptions in your supply chain this year (2024) to purchase mango?			Total
		Natural disasters	Transportation	Price hike	
Gender	Male	13	7	30	50
	Female	9	4	22	35
Total		22	11	52	85

5.2 Based on the profession

What is your role in the mango supply chain * What are the main factors contributing to the price hike of mangoes?

		What are the main factors contributing to the price hike of mangoes?						Total
		Increased production costs	Higher transportation costs	Increased demand	Limited supply	Market monopolies	Export demand	
What is your role in the mango supply chain	Consumer	14	9	8	19	12	7	69
	Wholesaler	2	1	1	1	0	0	5
	Supplier	0	1	1	4	0	0	6
	Farmer	0	2	1	1	0	1	5
	Total	16	13	11	25	12	8	85

because of man-made events or reasons?

		Do you agree that the price hike of mangoes is created because of man-made events or reasons?					Total
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree	
What is your role in the mango supply chain	Consumer	3	9	24	27	6	69
	Wholesaler	0	0	1	4	0	5
	Supplier	0	1	1	3	1	6
	Farmer	1	0	1	3	0	5
	Total	4	10	27	37	7	85

What is your role in the mango supply chain * Have there been any disruptions in your supply chain in this year (2024) to purchase mango?

		Have there been any disruptions in your supply chain this year (2024) to purchase mango?			Total
		Natural disasters	Transportation	Price hike	
What is your role in the mango supply chain	Consumer	15	7	47	69
	Wholesaler	2	2	1	5
	Supplier	3	1	2	6
	Farmer	2	1	2	5
	Total	22	11	52	85

Impact of the price hike on your economic situation

How do you perceive the overall impact of the price hike on your economic situation?

	Frequency	Percent	Valid Percent	Cumulative Percent
Very negative	17	20.0	20.0	20.0
Negative	48	56.5	56.5	76.5
Valid Neutral	13	15.3	15.3	91.8
Positive	6	7.1	7.1	98.8
Very positive	1	1.2	1.2	100.0
Total	85	100.0	100.0	

Will you buy mangoes if the price is high?

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	27	31.8	31.8	31.8
Valid No	58	68.2	68.2	100.0
Total	85	100.0	100.0	

How has the price hike affected your purchasing/selling behaviour?

	Frequency	Percent	Valid Percent	Cumulative Percent
Reduced quantity purchased/sold	63	74.1	74.1	74.1
No change	5	5.9	5.9	80.0
Valid Increased quantity purchased/sold	5	5.9	5.9	85.9
Stop purchasing mangoes	12	14.1	14.1	100.0
Total	85	100.0	100.0	

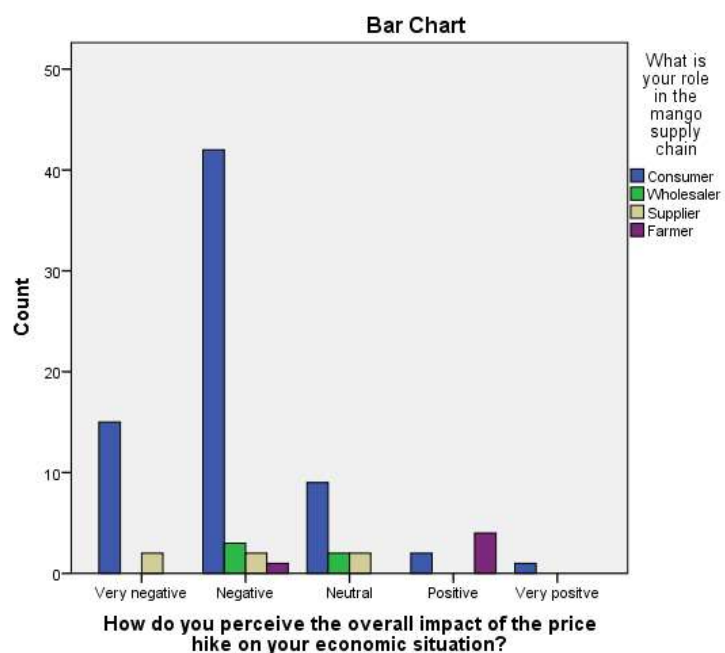
- The price hike has significantly influenced purchasing and selling behavior. The majority of people (74.1%) have responded by reducing the quantity of items they purchase or sell. A smaller segment (14.1%) has stopped buying mangoes altogether. Only a small portion (5.9%) have maintained their purchasing and selling behavior unchanged, while an equal percentage (5.9%) have opted to increase the quantity of what they purchase or sell.

How do you perceive the overall impact of the price hike on your economic situation? *

What is your role in the mango supply chain

	What is your role in the mango supply chain				Total
	Consumer	Wholesaler	Supplier	Farmer	

How do you perceive the overall impact of the price hike on your economic situation?	Very negative	15	0	2	0	17
	Negative	42	3	2	1	48
	Neutral	9	2	2	0	13
	Positive	2	0	0	4	6
	Very positive	1	0	0	0	1
Total		69	5	6	5	85

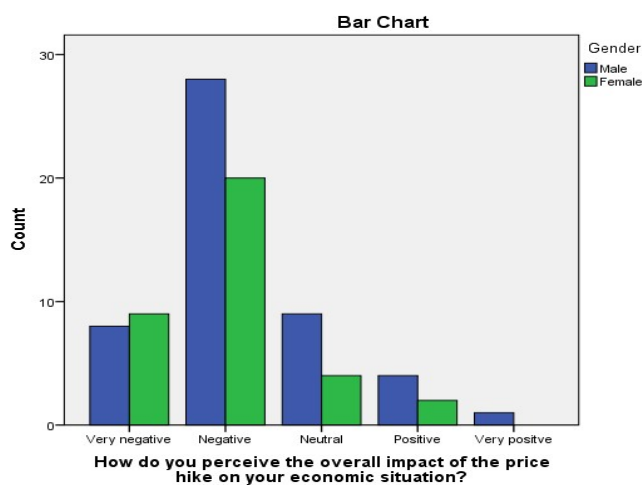


6.1 Gender

How do you perceive the overall impact of the price hike on your economic situation? * Gender

	Gender		Total
	Male	Female	
How do you perceive the overall impact of the negative	8	9	17

price hike on your	Negative	28	20	48
economic situation?	Neutral	9	4	13
	Positive	4	2	6
	Very positive	1	0	1
Total		50	35	85



Is the lack of mango supply responsible for the price hike?

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	73	85.9	85.9	85.9
No	12	14.1	14.1	100.0
Total	85	100.0	100.0	

Is the mango supply chain management responsible for the price hike?

	Frequency	Percent	Valid Percent	Cumulative Percent
Agree	79	92.9	92.9	92.9
Disagree	6	7.1	7.1	100.0

Total	85	100.0	100.0	
-------	----	-------	-------	--

Do you agree that the increase in mango prices has an impact on the per capita income of people in Bangladesh?

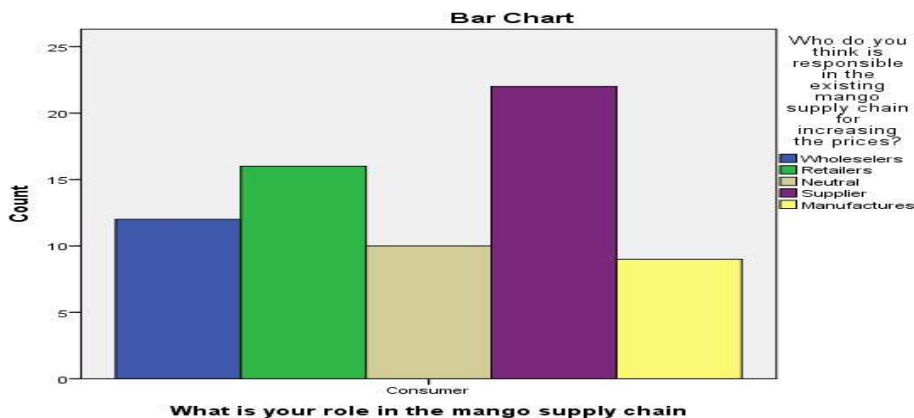
	Frequency	Percent	Valid Percent	Cumulative Percent
Strongly agree	4	4.7	4.7	4.7
Agree	45	52.9	52.9	57.6
Neutral	30	35.3	35.3	92.9
Disagree	6	7.1	7.1	100.0
Total	85	100.0	100.0	

Who do you think is responsible in the existing mango supply chain for increasing the prices?

	Frequency	Percent	Valid Percent	Cumulative Percent
Wholesalers	15	17.6	17.6	17.6
Retailers	21	24.7	24.7	42.4
Neutral	14	16.5	16.5	58.8
Supplier	24	28.2	28.2	87.1
Manufacturers	11	12.9	12.9	100.0
Total	85	100.0	100.0	

What is your role in the mango supply chain * Who do you think is responsible in the existing mango supply chain for increasing the prices?

	Who do you think is responsible in the existing mango supply chain for increasing the prices?					Total
	Wholesale rs	Retailers	Neutral	Supplier	Manufactu rers	
What is your role in the mango supply chain Consumer	12	16	10	22	9	69
Total	12	16	10	22	9	69



Adaptation strategies

What strategies have you adopted to cope with the price hike?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Seeking alternative markets	22	25.9	25.9	25.9

Supply Chain Insider

Volume 13, Issue 01, 201. 10-10-23 ISSN: 2617-7420 (Print), 2617-7420 (Online)

supplychaininsider.org Page 22

Reducing purchase/sales volume	45	52.9	52.9	78.8
Increasing selling prices	8	9.4	9.4	88.2
Seeking financial assistance/subsidies	5	5.9	5.9	94.1
other	5	5.9	5.9	100.0
Total	85	100.0	100.0	

- Reducing Purchase/Sales Volume (52.9%): We have reduced the volume of goods we purchase and sell. This reduction helps us manage costs more effectively and reduces the impact of price increases on our overall budget.
- Seeking Alternative Markets (25.9%): We are exploring alternative markets to source our products or find new customers. This strategy aims to mitigate the effects of price increases by diversifying our supply and customer base.
- Increasing Selling Prices (9.4%): We have adjusted our selling prices to offset the higher costs. This helps us maintain profitability despite the rising expenses.
- Seeking Financial Assistance/Subsidies (5.9%): We are pursuing financial assistance or subsidies to help manage the increased costs. This support can ease the financial strain and help us stabilize our operations.
- Other (5.9%): We have implemented additional measures not covered by the above categories to address the price hikes and manage our budget more effectively.

Does the price hike of mangoes have any impact on your fundamental rights?

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	38	44.7	44.7	44.7
Maybe	25	29.4	29.4	74.1
No	22	25.9	25.9	100.0
Total	85	100.0	100.0	

**Do you think the government's actions and approaches are
enough to solve the mango price hike problem?**

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	32	37.6	37.6	37.6
Valid May be	11	12.9	12.9	50.6
No	42	49.4	49.4	100.0
Total	85	100.0	100.0	

What strategies to manage and mitigate the impact of cost increase?

	Frequency	Percent	Valid Percent	Cumulative Percent
Avoiding	12	14.1	14.1	14.1
Less consumption	32	37.6	37.6	51.8
Valid Government Intervention	41	48.2	48.2	100.0
Total	85	100.0	100.0	

Opinion

Which of the following strategies do you employ to manage rising costs?

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Negotiating better terms with suppliers	19	22.4	22.4	22.4

Increasing efficiency through process optimization	26	30.6	30.6	52.9
Passing costs onto consumers through price adjustments	13	15.3	15.3	68.2
Seeking alternative suppliers or materials	11	12.9	12.9	81.2
Implementing cost-saving technologies	16	18.8	18.8	100.0
Total	85	100.0	100.0	

To manage rising costs, the above table prioritizes increasing efficiency through process optimization (30.6%), as it often leads to significant long-term savings and improvements in productivity. Additionally, implementing cost-saving technologies (18.8%) helps to streamline operations and reduce expenses. It also negotiates better terms with suppliers (22.4%) to secure more favourable deals and minimize costs. Passing costs onto consumers through price adjustments (15.3%) is considered if other strategies are insufficient. Lastly, seeking alternative supports or materials (12.9%) is employed to explore cost-effective options.

Research Limitation

- ❖ This research article only included a survey conducted in Rajshahi City. As a result, it cannot correctly depict the situation with this problem throughout Bangladesh.
- ❖ While conducting this research, only young generation data has been evaluated, no other age group has been evaluated here.
- ❖ Economic status was not taken into consideration while conducting this research.
- ❖ Due to a lack of time and funds, the number of participants in the study was small and the analysis of this study was done using only quantitative methods and no qualitative research methods were used.

Conclusion

The recent price hike in the mango supply chain is a multifaceted issue driven by a combination of factors such as:

- Rising costs of inputs like fertilizers, labour, and transportation have escalated the overall production expenses, which are passed on to consumers in the form of higher prices.
- Inefficiencies in transportation, storage, and distribution have caused delays and losses, further straining the supply and driving up prices.
- Growing global demand for mangoes, coupled with limited supply due to production and logistical challenges, has created a demand-supply imbalance, leading to price hikes.
- The price increase has adversely affected both consumers, who face higher costs, and farmers, who may not always benefit from these higher prices due to middlemen and market dynamics (MAHMUD et al., 2020).
- To mitigate future price hikes, it is crucial to invest in climate-resilient agriculture, improve supply chain efficiency, and implement policies that protect both farmers and consumers.
- Long-term sustainability in the mango supply chain can be achieved by adopting technology, enhancing infrastructure, and fostering collaboration among stakeholders to ensure stable prices and equitable distribution.

To address these issues, a multi-pronged approach is necessary. This includes seeking alternative markets, reducing purchase sales volume, increasing selling prices, seeking financial assistance/subsidies, and others (Chowdhury et al., 2016). By taking these steps, ensuring fair returns for farmers, and making mangoes more accessible to consumers, thereby sustaining the long-term viability of the mango supply chain.

References

1. Amin, M. R. (2015). *Studies on physico-chemical and microbiological qualities of some selected brand of mango fruit juice of Bangladesh* (Doctoral dissertation, BRAC University).
2. Amwoka, E. M. (2021). *Effectiveness of Selected Postharvest Handling Practices and Technologies to Preserve the Postharvest Quality of Mango Fruit* (Doctoral dissertation, UON).
3. Amwoka, E. M. (2021). *Effectiveness of Selected Postharvest Handling Practices and Technologies to Preserve the Postharvest Quality of Mango Fruit* (Doctoral dissertation, UON).
4. Anam, K., Mostafiz, M. B., Shah, S., Dhar, R. C., & Ahmed, S. (2023). Multi Criteria Decision Making for Fresh Mango Supply Chain Risk Management: An ISM & TOPSIS-Based approach. *Supply Chain Insider* | ISSN: 2617-7420 (Print), 2617-7420 (Online), 11(1).
5. Asha, A. A., Shill, A. C., Alam, S., Talukdar, H. D., & Adhikary, J. (2022). Price hike across supply chain layers of consumer goods: An investigative study on the retailing industry of Bangladesh. *Supply Chain Insider* | ISSN: 2617-7420 (Print), 2617-7420 (Online), 8(1).
6. Chowdhury, M., Upadhyay, A., Briggs, A., & Belal, M. (2016, May). An overview of green supply chain management practices in Bangladesh construction industries. In *POMS Conference 2016* (pp. 1-10).
7. Dey, A., Afnan, J., Nayem, N. H., Dey, A., & Tonu, F. T. (2023). Supply Chain Modelling of Daily Consumed Cereal Grain in Bangladesh. *Supply Chain Insider* | ISSN: 2617-7420 (Print), 2617-7420 (Online), 11(1).

8. Keraita, B., & Drechsel, P. (2015). *Consumer perceptions of fruit and vegetable quality: certification and other options for safeguarding public health in West Africa* (Vol. 164). International Water Management Institute (IWMI).
9. Kiloos, A. M., Muflikh, Y. N., Joyce, D., & Aziz, A. A. (2023). Understanding the complexity of the Indonesian fresh mango industry in delivering quality to markets: A systems thinking approach. *Food Policy*, 118, 102497.
10. MAHMUD, S., PARTHIB, N. H., MUNTASIR, T., & HASAN, M. (2020). SUPPLY CHAIN AUTOMATION: KEY STAGE IN SUPPLY CHAIN THAT CAN BENEFIT. *Supply Chain Insider*| ISSN: 2617-7420 (Print), 2617-7420 (Online), 3(1).
11. Nagle, T. T., & Müller, G. (2017). *The strategy and tactics of pricing: A guide to growing more profitably*. Routledge.
12. Rahman, A., Adib, S., Barua, O., Tinni, S. A., & Chakraborty, A. (2023). Supply Chain Development of Hatcheries: A Comprehensive Analysis. *Supply Chain Insider*| ISSN: 2617-7420 (Print), 2617-7420 (Online), 10(1).