

Analyzing the Factors Influencing Price Hike of Green Chili in Bangladesh: A Supply Chain Perspective

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Abstract:

Green chili occupies certainly one of the prominent places in the Bengali cookery. It has been seen that rise in the price of it has a considerable influence on the buying behaviour of the consumers. This research is conducted with an aim of establishing the cause of this high prices. This research will also assess the supply chain of the green chili in Bangladesh.. The research also portrays possible solutions to this problem. The study investigates key factors behind the price hike, identifies responsible parties, analyzes the overall cost of production, and proposes effective supply chain management improvements in Bangladesh

By analyzing data collected from various sources, including consumer surveys and expert opinions, the research paper highlights how factors like fertilizer expenses, syndicates, inflation, greatly affect price fluctuations of green chili.

The study emphasizes the necessity for proactive government regulations, continuous market monitoring, and strategic policies to control price hikes and reduce the adverse effects on consumers' purchasing power. Through this comprehensive analysis, the research paper aims to find out the complex entities that contribute to the price hike of green chili and provide suggestions to mitigate the adverse situation.

Keywords:

Green chili, supply chain management, price hike, consumers, fertilizer expenses, syndicates, inflation.

1. Introduction:

1.1 Overview:

Green chili has been an integral part of Bengali culture. Green chili is a must item for everyday cooking in every household. Chili peppers are native to South and Central America. They were introduced in South Asia in the 1500s and have come to dominate the world spice trade (Huq and Arshad, 2010). Chili peppers contain many nutrients and vitamins, counting calories, protein, fat, calcium, vitamin A, vitamin B1, and vitamin C (Harniati Harniati et al., 2022).

Consumption.....

The "**price hike**" denotes a significant increase in the cost of green chili, going up to unexpected levels. This hampers consumers' purchasing power and deprives one from nutritious benefits. Price hike creates a gap between consumption and demand.

Price hike: A price hike is the practice of increasing the price of goods, services, or commodities to a level much higher than is considered reasonable or fair. - Wikipedia

1.2 Research Canvas:

The increasing price of green chili has become a significant concern in Bangladesh. This research aims to investigate the key factors contributing to the price hike in the supply chain management of green chili and explore potential strategies to address the issue.

Our research paper aims to find out the main reasons for the price hike of green chili, who is responsible for this price hike situation, and the effect of this price hike on the consumer. At this moment we notice that many persons or groups are involved in this process, such as Government, farm owners, fertilizer and pesticide suppliers, wholesalers, retailers, and consumers. All these persons or groups are related to the Supply Chain Management process. While preparing this paper we observed that people, especially middle-class and low-class people or families, are most affected by this price hike.

1.3 Research Objectives:

The main objectives of this research paper are given below:

1. To identify the price hike reason of green chili.
2. To analyze the person or group that influences the rise in green chili price.
3. To improve the supply chain Management of green chili effectively.
4. To point out the impact on producers and sellers due to the increase in green chili price.
5. To evaluate the impact on the lives of common people due to the rise in green chili price.
6. To find out the possible solution.

1.4 Research significance:

This research tries to dive into the market of green chili. Green chili is an important horticulture commodity in our country. But the price of it is skyrocketing and its market is highly volatile. Investigating this market and the supply chain behind it can reveal the everlasting question among the consumers behind this unbelievable pricing and may bring possible solution to stopping this. This study tries to understand why the price is going up day by day. This research tries to compare and understand the factors that influence the price hike on those commodities, find out who is responsible for the price hike, try to understand the effect on the consumer of Bangladesh and identify their behaviour in this situation.

2. Literature Review:

2.1 Introduction:

The increasing prices of green chili have become a significant concern in Bangladesh. This research aims to investigate the key factors contributing to the price hike in the supply chain of green chili and explore potential strategies to address the issue.

2.2 The management of the Value Chain:

The concept of “value chain” was introduced by Porter (1985) to describe the full range of activities, which are required to bring a product or service from conception, through the different phases of production, distribution to consumers, and final disposal after use (Zamora, 2016). The green chili value chain in Bangladesh is a vital component of the country's agricultural sector, involving multiple stages from cultivation to consumer distribution. Smallholder farmers produce the crop, which is then collected by local traders and transported to wholesale markets before reaching retailers and consumers. This chain is influenced by factors such as seasonal fluctuations, market demand, and logistical challenges, all of which can impact the stability and pricing of green chili. Understanding this supply chain is essential for addressing its challenges and ensuring a steady and equitable distribution of this important commo

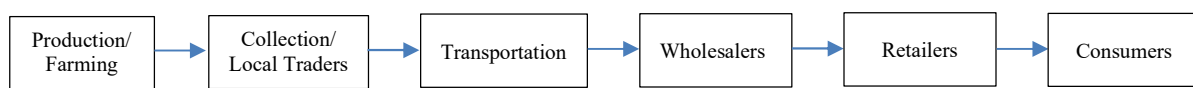


Figure: Supply chain of green chili

Producing/Farming: Farmers, mostly smallholders, prepare the ground, plant seeds, and oversee the crops during the growing season before beginning the production of green chilies. Planting, watering, controlling pests, and harvesting are some of the tasks involved in this stage.

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Collection/ Local Traders: Local traders or middlemen gather green chilies after they are harvested. These vendors frequently buy the chilies from farmers directly at farm gates or local marketplaces. The chiles might be sorted and graded according to quality.

Transportation: The green chilies are shipped to wholesale or regional markets following their gathering. Depending on the produce's volume and distance, trucks, vans, or other types of vehicles are usually used for transportation.

Wholesaler: The chiles are further sorted, graded, and kept at the wholesale level. The distribution of the chiles around the nation depends heavily on wholesalers. They sell in large quantities to importers, processors, and retailers.

Retailer: Green chiles are bought by retailers from wholesalers and then sold to customers. Supermarkets, grocers, and local marketplaces all have retailers. They serve as the last connection point between the end user and the supply chain.

Consumer: The end users, who buy green chilies for domestic use, are the last link in the supply chain. Green chilies are purchased by Bangladeshi customers from retail stores, street vendors, and local markets.

2.3 Green chili production

Green chili production in Bangladesh is a key part of the agricultural sector, influencing both local consumption and farmers' incomes. Production levels vary based on factors like weather, pests, and market conditions. Bellow is the production of green chili from the past years:

Production of Green chili

Fiscal Year	*Production (Metric tons)	*Target Production (Metric tons)
2021-2022	2.984	-
2022-2023	2.907	3.113

*in lacs

In the financial year 2022-2023:

- The production was 2.907 but the target was 3.113

2.4 Lower and middle-class families

Every society possesses some form of social class which is important to the marketers because the buying behaviour of people in a given social class is similar (Nilesh & Gajjar, 2013). Households earning 12,900 – 21,500 BDT per month are considered middle-class households, and those earning less than 12,900 BDT per month are considered lower class households

(Fidah et al., 2024). And according to the Bangladesh Bureau of Statistics, the price hike of livestock products affected their income, education, food, and dispersion between their expectations and reality (middle-class statistics, 2023). These are the people who are most affected by the sudden price hike.

2.5 Consumer behaviour

Consumer behaviour refers to the selection, purchase and consumption of goods and services for the satisfaction of their wants. Customer behaviour study is based on consumer buying behaviour (Nilesh & Gajjar, 2013). Shortly, the actions taken by a consumer while purchasing and taking services from the service provider are known as consumer behaviour. If a firm can study the behaviour properly, it will become easier for it to sustain itself in the market. (Lanfranchi et al., 2020). There are various factors influencing the purchases of consumer such as social, cultural, personal and psychological (Nilesh & Gajjar, 2013).

3. Methodology

This research has been conducted to understand the underlying reasons behind this jaw dropping price hike of green chili in the market. By applying suitable research methods, this research aims to point out influencing factors that is responsible for the rapid growth of price.

3.1 Research Gateway:

The researchers dived into various articles, blogs, govt. sites, news sites, YouTube to find relevant data according to this research. The research was focused on primary data. Secondary data was collected to aid our research and to understand the market better. We used recognized and verified sources to collect various articles, news, and research paper for our secondary data.

3.2 Data collection:

The Primary data collection was mainly conducted through online questionnaires where participants were sent a set of questions to respond on. The questionnaire addressed topics like consumption rate, market condition, income, supply and demand, priced hike, consumer behaviour and potential solution to the problem. Physical interview was also a part of collecting primary data.

The secondary data was collected from verified news portals, relevant authorities, and various sources.

3.3 Research Strategy:

Systematic approach was followed to conduct the research. It begins with data collection from primary and secondary sources, then analysis thoroughly using various statistical tools such as SPSS. Both qualitative and quantitative data were used to find out the reasons behind the price hike.

3.4 Research method:

The methods employed throughout the research include the use of a structured questionnaire and physical survey to gather primary data. By using SPSS for analyses of statistical data such as mean, median, mode, and regression analyses, we measure the probability. These methods will help to understand the factors influencing the price hike of livestock products (meat, fish, eggs, beef, poultry, etc.) within the supply chain management.

3.5 Data Analyses and Findings:

The price hike affects the buying decision and household budget significantly of the byers. This This research presents a comprehensive analysis of data that has been collected through questionnaires and physical survey. We collected our primary data from 200 consumers through online questionnaire. We visited the local markets to collect data and interviewed 300 participants.

The survey indicates that 89% of the people thinks the price is very high. 87% of people use green chili on daily basis And 73% tells that the high price affects their overall household budget. 60% will lower their consumption because of high price and 29% thinks about switching to dried chili. 58% thinks that the price of green chili is high during the rainy season.

68% of people purchase green chili from local market. 71% thinks that the middleman are the reason for the price hike. 83% of the people blames syndicate for price hike.

4. Price Comparison:

The price of green chili has dramatically increased even in the difference of months. In the month of July 2024, the price of green chili was 60tk per kg. But in the month of August 2024, the price of green chili went to 400tk per kg. IN 2023, the price of green chili was 140tk per kg on the month of February.

5. Factors influencing price hike of livestock products

5.1 Fertilizer cost

To produce green chili, 10 tons of cow dung, 250 kg of urea, 200 kg of TSP and 150 kg of MOP fertilizer is needed to apply per hectare of land . At the time of land preparation, Samudaya Gobar, TSP and 50 kg MOP fertilizers are applied . 25 days after planting, 84 kg urea and 34 kg MOP fertilizer were first applied . The price for these fertilizers had been increased by 5 tk. in 2023. This is a great reason for the high price of green chili in the market.

5.2 Syndicate

The name "Syndicate" is frequently invoked in close proximity to the mention of Bangladesh's market conditions. A syndicate, as defined by Investopedia's definition of business judgment, is an alliance that collaborates to accomplish a significant profit-centered or dominant corporate goal. Syndicates collaborate to complete large tasks or projects that are typically too big for one person to handle alone. The Syndicate supports all goals in which each member has a vested interest; it is not primarily a charity. Syndicates are typically held responsible for the majority of market volatility. In this instance, the syndicates behind this price increase are likewise primarily accountable to a variety of experts.

The farm owner allegedly does not receive a fair price. The syndicate paid exorbitant prices to market retailers for chilis that they had purchased at a discount. In the hands of the buyer at different points in the syndicate, the product of 5 taka effectively becomes 50 taka. To put it plainly, the farmer cannot go to the market by himself and sell the chili. Farm owners are required to sell chili to the syndicate in this instance. These syndicates get together in this case to lower the cost of the chili. The farm owner is thus left powerless and is forced to either return home with the goods or sell the chili at a loss.

The farm owner is compelled to sell the product in such a circumstance, either at a loss or a small profit. Syndicate members purchase chili at a discount and resell it for a premium in the retail and wholesale sectors. By doing this, neither the buyer nor the farm owner will receive a lower price for the commodity as a result of syndicate manipulation. A few middle-class individuals embezzle the profits.

Additionally, syndicates aim to raise prices by fabricating shortages through the hoarding of poultry and livestock. Syndicates take advantage of the closure of import-export during special occasions, particularly in Bangladesh, to raise the cost of the goods.

5.3 Inflation

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Inflation rate affects the prices of a country's products significantly. This affects the prices of all steps in the supply chain process of the green chili. As a result, consumers have to pay the higher prices.

Inflation Rate in Bangladesh.

Year	Inflation rate in %
Jul, 2024	11.66%
Jul, 2023	9.69%
Jul, 2022	7.48%
Jul, 2021	5.36
Jul, 2020	5.53%

The inflation rate in July 2024 was 11.66% which has marked the highest inflation rate since September 2011.

5.4 Supply and Demands

The production of the chili was 2.907 lakh metric tons. But, the target was 3.113 metric tons. There is a gap of 0.209 metric tons in production. This gap causes a gap between demand and supply in the market. As the supply decreases, the demand increases and thus the price also increases.

5.5 Other Factors

- **Transportation Cost**

Transportation cost fluctuation can be a great cause for price hike of green chili.

Difficulties and casualties in the transportation process can cause some portion of supply to be unusable and thus increasing the price of the fresh ones.

- **Weather and Climate Change**

Weather and climate change heavily affect on price hike of chilies. Especially when it's the rainy season, the cultivation of green chili is seriously hampered and supply gets limited which leads to price hike

- **Government Policy**

Government policies like import-export restrictions, subsidies, taxes, and quality standards can indirectly impact the supply and demand of livestock products.

6. Impact and Possible Solution

6.1 Impact:

The rise in livestock product prices has had some impact. These effects are:

- ❖ People's purchasing power has decreased.
- ❖ People are buying lower amounts than before.

6.2 Possible Solution:

- ❖ The government needs to make arrangements for monitoring the market regularly and strictly.
- ❖ The government should determine the price.
- ❖ The government should specify the amount of profit earned on certain products.
- ❖ The government should manage the syndicate.
- ❖ The government should set storage directions for green chili.
- ❖ The government should fund the farmers.

7. From this research we came to conclusions

This research paper has clarified the multifaceted problem of price hikes for livestock products.

- ❖ The shortage in production is the main reason behind the price hike.
- ❖ The syndicate is a major cause behind the price hike. They try to generate high profit by creating artificial storage.
- ❖ Inefficient supply chain is a big reason behind the price hike.
- ❖ No one is solely responsible for the rise in price. Everyone is blaming each other but from this research, we can see that everyone in Supply Chain Management (SCM) process is equally responsible for this price hike.

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