

Original Article

Open Access

Insights into Cheese Marketing in Bangladesh: Marketing Cost, Margin, and Efficiency

 **Imtiaj Ahmed**

Department of Agribusiness and Marketing, Bangladesh Agricultural University, Mymensingh, Bangladesh

 **Shakila Salam***

Professor, Institute of Agribusiness and Development Studies (IADS), Bangladesh Agricultural University, Mymensingh, Bangladesh
Email: shakila@bau.edu.bd

 **Shihab Shahriar Adib**

Institute of Agribusiness and Development Studies (IADS), Bangladesh Agricultural University, Mymensingh, Bangladesh

Article History

Received: 23 August, 2024

Revised: 27 September, 2024

Accepted: 3 October, 2024

Published: 6 October, 2024

How to Cite

Imtiaj Ahmed, Shakila Salam and Shihab Shahriar Adib. (2024). Insights into Cheese Marketing in Bangladesh: Marketing Cost, Margin, and Efficiency. *Sumerianz Journal of Business Management and Marketing*, 7(4): 74-80.

Abstract

Cheese though not native to Bangladesh has seen an increased surge in popularity in recent years. Even though there have been several studies that focus on the economic aspects of cheese production, there is a dearth of studies tackling the marketing aspects of cheese in Bangladesh. This study is an attempt to examine the marketing channels, the cost associated, the marketing margin, and the marketing efficiency of cheese in Bangladesh. This study is mainly based on primary data, collected from purposively selected participants from the districts of Kishoreganj, Thakurgaon, and Manikganj. The respondents consisted of 50 cheese producers and 20 market intermediaries. Simple descriptive statistics were employed to analyze the data. Traditional and modern types of channels were associated with the marketing of cheese. Marketing cost analysis identified, transportation, facility rent, and outlet maintenance to be the primary cost components. The value additions of per kg cheese by wholesaler-cum-retailers, retailers, and supermarkets were calculated at BDT 232.40, BDT 97.12 and BDT 250, respectively. Significant net margins were observed across all the channels. Though producers mostly used Channel I, Channel III (Producers → Consumers) and Channel IV (Producers → Retailers → Consumers) were identified to be the most efficient among the different channels examined in the study. Channel II had the lowest price spread, on the contrary, Channel V had the highest one. Just after direct marketing, cheese producers received higher percentage of consumers price (74%) using Channel II. Given the current potential of the cheese industry, the government should focus on this sector to address and overcome existing challenges in cheese marketing.

Keywords: Marketing channel; Marketing cost; Margin; Efficiency; Price spread; Cheese.

1. Introduction

Cheese can be defined as a dairy product made from milk, where the primary protein “casein” is coagulated using rennet or similar enzymes in the presence of lactic acid (Davis, 2001). The coagulation step is followed by cutting, cooking and/or pressing the curd, which then is given a desired shape using a mould. Aged cheeses like cheddar and gouda are ripened at suitable temperatures and humidity. Cheese typically comprises proteins and fat from milk, usually the milk of cows, buffalo, goats, or sheep. Lactic acid bacteria (LAB) is commonly used to convert lactose in to lactic acid during cheese making (McElhatton and El Idrissi, 2016). According to a study by Sumners (2017) eating cheese restricts the development of liver cancer in addition to improving liver health. Ibrahim *et al.* (2010), discovered that probiotic cheese can prevent age-related weakening of the immune system. In addition

to brushing regularly, consuming cheese is beneficial for the teeth. Cheese helps to reduce blood pressure and facilitates the loss of total abdominal fat.

Cheese an age-old staple, is cherished for its richness, creaminess, flavour, and satisfying qualities. Not long after our ancestors learned to domesticate animals and to utilize their milk, the art of cheese making was invented. Ever since, countries worldwide have experimented with cheese-making, by varying the types of milk, duration of ripening, and employing various additives like salt or acid to produce unique textures and flavours. In Bangladesh, the history of cheese dates back to the 19th century, the people of a remote low-lying haor area of the district to Kishoreganj named Austagram started making fresh cheese from cow milk using cattle abomasum as a coagulant. Later, some cheese producers from Austagram migrated to the capital of Dhaka and began producing cheese on a smaller scale, thus the Austagram cheese got popularized in Dhaka and nearby areas in the form of Dhaka cheese.

Being an agricultural country, the economy of Bangladesh is primarily based on agriculture and livestock, which are essential components of the rural economy. Dairy farming is one of the major components of animal agriculture and part of the mixed farming system in Bangladesh (Saadullah, 2001). With an increase in the popularity of fast-food items (i.e., sandwiches, burgers, and pizza), there is an ever-growing demand for various types of cheese in Bangladesh. Kishoreganj's Austagram cheese is very popular for its creamy taste. Besides, Mozzarella is very popular among the consumers as it's mostly used as pizza topping for its stretchy nature, whereas the sliced ones are highly used for home consumption. As the spread cheese is comparatively new for Bangladeshi consumers, consumption of this particular cheese is comparatively low (Das, 2019).

As cheese is a new value-added processed milk product rather than traditional products (like yogurt), understanding the market structure—key players, supply chain dynamics, etc.—of this product is crucial. It provides insights into how cheese moves from production to the consumer, relationships among market intermediaries and highlighting their roles. Besides, as a highly value-added product, it is important to identify inefficiencies and areas where costs can be reduced. This can lead to more competitive pricing for consumers and better margins for producers and market traders. Analysing the profit margins at different stages of the marketing chain, from producer to retailer, can help to comprehend where value is created and how profits are allocated. Gaining better terms with distributors or altering pricing methods are possible with this knowledge. The current study intends to investigate the marketing channels, the cost associated with, the marketing margin, and the efficiency of cheese marketing in Bangladesh because there have been few studies that exclusively focus on the marketing aspects and instead have concentrated on the methods, economic aspects, and challenges of cheese production.

2. Research Methods

2.1. Collection of data

Due to the sharp increase in cheese production, the districts of Kishoreganj, Thakurgaon, and Manikganj are purposively selected as the study areas. The probability of cooperation from the respondents, convenience of accessibility and communication, and a lack of previous studies conducted are also contributing factors to the selection of these areas. The study employed the purposive sampling technique for selecting 50 cheese producers (with 40 producing semi-hard cheese and 10 producing fresh cheese) and 20 marketing intermediaries. For interviewing respondents, a structured questionnaire was developed and used. There is an emphasis on careful, easily understandable wording to ensure unambiguity. The study was mainly emphasized on the reliability of both primary and secondary data. The secondary data was gathered from various publications of the Ministry of Planning, Department of Agricultural Marketing (DAM), various research articles, books, newspapers and online sources.

2.2. Analytical Techniques

Descriptive statistics are primarily used for the analysis of the data. Results are mainly presented in tabular form with the help of averages, percentages, etc. for the meaningful visualization of the outcomes. Following are the analytical techniques utilized in the study:

2.3. Estimation of Gross Marketing Margin, Net Margin, Price Spread and Producers' Share in Consumers' Price

Gross marketing margin (BDT) = Sale price (BDT) - purchase price (BDT)

Net margin (BDT) = Gross marketing margin (BDT) - marketing cost (BDT)

Price spread = Consumer price - Net price received by the producer

Producers' share in consumers' price = $\frac{\text{Producers' net selling price}}{\text{Consumer price}} \times 100$

2.4. Estimation of Marketing Efficiency

To assess the marketing efficiency of different channels for cheese, following two methods were employed:

i. According to Shepherd's Method:

$$\text{Marketing efficiency} = \frac{\text{Retailer's sales price}}{\text{Total marketing costs}}$$

ii. According to Acharya's Method:

$$\text{Marketing efficiency} = \frac{\text{Net price received by the producers}}{\text{Total marketing costs} + \text{Total net margin}}$$

In both methods, a higher ratio indicates greater efficiency.

3. Results and Discussion

3.1. Marketing Channels

Marketing channels are the bridges that connect the producers and the consumers. They facilitate the distribution of the products and service delivery (Banyte *et al.*, 2011; Coughlan, 2010). An effective channel strategy can be defined as the one that focuses on end-user demands, management of cost, and the maintenance of positive relationships with channel associates (Coughlan, 2010).

Several intermediaries can be involved with the traditional channels associated with cheese marketing, on the contrary, modern channels may include direct sales, wholesalers, retailers, and stores specialized in selling cheese (Gómez-Huesca *et al.*, 2020). Direct marketing channels establish a direct link between farm households and consumers, fostering long-term relationships based on trust and a better understanding of consumer needs and preferences. Indirect channels, involving multiple intermediaries, result in a looser connection between producers and consumers, potentially leading to higher costs for small-scale artisanal products. In this study, a total of 6 channels were found to be associated with cheese marketing. Figure 1 illustrates the marketing channels associated, where it is observed that for the marketing of fresh and semi-hard cheese there are separate channels. Channel I (Producers → Wholesaler-cum-retailers → Retailers → Consumers), Channel II (Producers → Wholesaler-cum-retailers → Consumers), Channel III (Producer → Consumers), and Channel IV (Producer → Retailers → Consumers) are the channels used for the marketing of semi-hard cheese. On the other hand, Channel V (Producers → Outlet → Retailers (Supermarket) → Consumers), and Channel VI (Producers → Outlet → Restaurants → Consumers) are employed for the distribution of fresh cheese.

The choice of marketing channel for small producers depends on various factors, including target consumer segments, production capacities, cheese characteristics, and overall farm goals. Agricultural products, including cheese, face complex transportation and storage issues, necessitating a greater number of intermediaries in the distribution process (Petković and Užar, 2020). Most producers use Channel I, consistent with Hasan (2021), who noted that cheese is traditionally distributed through intermediaries or wholesalers in Bangladesh who locate possible customers and negotiate over pricing. Similarly, in Venezuela, the most common marketing channel involved producers selling directly to transporters, who then resold the cheese to retailers in Barquisimeto, the nearest city, before reaching the final consumer (Araque *et al.*, 2010). However, a small number of local cheese producers are able to sell directly to urban market retailers in Bangladesh (Hasan, 2021).

3.2. Marketing Cost and Margin

In the study, the cost of marketing involves the cost of producer, wholesaler-cum-retailers, retailers and supermarkets for different functions performed by them to shift the cheese from producers to ultimate consumers. Marketing cost and net marketing margin depend on the supply of cheese. If the supply of cheese is sufficient then marketing cost will be minimum and net marketing margin will be maximum.

Producers of semi-hard cheese that sell a small portion of their product to local consumers are required to pay Bangladeshi Taka (BDT) 29.72 per kg for marketing, with transportation accounting for the largest percentage of costs at 58.51% and packaging for the remaining 35.77% (Table 1). Wholesaler-cum-retailers, who source semi-hard cheese from producers and distribute it to retailers and consumers, face a marketing cost of BDT 70.77 per kg, with transportation being the highest expense at 39.72%, followed by factory rent at 23.72%. The refrigerator used for preserving cheese is considered as depreciation and is the lowest of all the costs incurred, contributing to only 0.88% of the total cost.

Table-1. Average marketing cost of per kg cheese by different market participants

Cost Items	Average marketing cost (BDT/kg)			
	Producer	Wholesaler-cum-retailer	Retailer	Supermarket
Cost of transportation	17.39 (58.51)	28.11 (39.72)	18.38 (32.84)	14.00 (3.50)
Cost of rent	-	16.79 (23.72)	29.59 (52.88)	33.00 (8.25)
Cost of labelling	-	8.90 (12.58)	-	7.00 (1.75)
Cost of packaging	10.19 (35.77)	11.63 (16.43)	2.18 (3.90)	9.00 (2.25)
Storage cost	-	2.11 (2.98)	2.80 (5.00)	14.00 (3.50)
Mobile cost	1.70 (5.72)	2.61 (3.69)	2.18 (3.90)	6.00 (1.50)
Depreciation cost	-	0.62 (0.88)	0.83 (1.48)	72.00 (18.00)

Outlet maintenance cost	-	-	-	245.00 (61.25)
Total Marketing cost	29.72 (100)	70.77 (100)	55.96 (100)	400.00 (100)

Note: Values in the parentheses indicate the percentage of total marketing cost

Retailers, purchasing cheese from these wholesalers and selling to consumers, incur a lower marketing cost of BDT 55.96 per kg, with rent dominating at 52.88% and transportation at 32.84%. This aligns with Dagdemir (2000), who highlighted storage and transportation as the most substantial marketing cost items. In Totoremo, Venezuela, marketing costs averaged 0.04 US\$/kg of cheese, covering helper payments, transportation expenses, and ice for refrigeration (Araque et al., 2010). In contrast, supermarkets, which buy directly from producers and sell to consumers, encounter a significantly higher marketing cost of BDT 400 per kg, where outlet maintenance costs are predominant at 61.25%, followed by depreciation at 18%.

Producers incurred an average cost of BDT 793.80 to produce 1 kg of cheese, sold it at an average price of BDT 893.75, and yielding a net margin of BDT 70.23. (Table 2). Value addition by wholesaler-cum-retailers, as shown in Table 2, reflects an average purchasing price of BDT 893.75 per kg of cheese and a total marketing cost of BDT 70.77 per kg, culminating in a total cost of BDT 964.52 per kg and an average selling price of BDT 1196.92 per kg, resulting in a net margin of BDT 232.40. For retailers, the cheese is purchased at BDT 1196.92 per kg with a marketing cost of BDT 55.96, leading to a total cost of BDT 1252.88 per kg and a selling price of BDT 1350 per kg, which provides a net margin of BDT 97.12. Supermarkets, as outlined in Table 2, purchase cheese at BDT 800 per kg and incur a high marketing cost of BDT 400 per kg, resulting in a total cost of BDT 1200 per kg and a selling price of BDT 1450 per kg, with a substantial net margin of BDT 250 per kg. Supermarket includes different charges of the outlet and also adds extra vat, thus their retail price per kg of cheese is higher than another channels.

Table-2. Value addition of per kg cheese by different market participants

Particulars	Producer	Wholesaler-cum-retailer	Retailer	Supermarket
a. Purchasing price or production cost of Cheese	793.80	893.75	1196.92	800
b. Marketing cost	29.72	70.77	55.96	400
Total cost	823.52	964.52	1252.88	1200
c. Selling price	893.75	1196.92	1350.00	1450
d. Gross Margin (c-a)	99.95	303.17	153.08	650
e. Net Margin (d-b)	70.23	232.40	97.12	250
f. Return on cost (%) [$\frac{e}{(a+b)} \times 100$]	8	24	8	21

3.3. Marketing Efficiency of Different Marketing Channels for cheese

The marketing efficiency of cheese varies across different channels. Channel VI is excluded from the analysis due to its involvement with countrywide restaurants, which fall outside the study area. Table 3 presents the marketing efficiency of cheese across various channels.

Table-3. Marketing efficiency of different channels for semi-hard and fresh cheese

Particulars	Semi-hard cheese				Fresh cheese
	Channel I	Channel II	Channel III	Channel IV	Channel V
a. Retailer's sale price or consumer's purchase price (BDT per kg)	1350	1196.92	893.75	1350	1450
b. Total Marketing cost (BDT per kg)	126.73	70.77	29.72	55.96	400
c. Total net marketing margins of intermediaries (BDT per kg)	329.52	232.40	70.23	400.29	250
d. Net price received by farmers (BDT per kg)	893.75	893.75	793.80	893.75	800
e. Producers' share in consumers' price [(d/a) x100]	66.20	74.67	-	66.20	55.17
Marketing efficiency					
- Shepherd's method (a/b)	10.65	16.91	30.07	24.12	3.63
- Acharya's method[d/(b+c)]	1.96	2.95	7.94	1.96	1.23

From the Table 3 it is observed that, Channel III (producer → consumers) exhibited maximum marketing efficiency with values of 30.07 and 7.94 using the Shepherd and Acharya formula respectively. The next efficient channels for semi-hard cheese production are Channel IV (producer → retailers → consumers) and Channel II (producers → wholesaler-cum-retailer → consumers), while Channel I (producer → wholesaler-cum-retailer → retailers → consumers) proves to be less effective. However, Channel V (fresh cheese) ranks as the least efficient among all the channels.

The efficiency of marketing channels depends on the number of intermediaries involved, where the highest efficiency is associated with direct farmer-to-consumer channels (Al, 2021). In light of this finding, in the present study Channel III (Producers → Consumers) would by far be the most efficient since the cheese is directly distributed to consumers without any intermediaries. This is also in line with the findings of Naufal *et al.* (2021) and Merel (2007), who identified that a higher total margin was associated with the longer channel involving more intermediaries. Similarly, the marketing efficiency index was found to be 18.43 for direct marketing and 1.52 for indirect marketing for Kars kashar cheese in Turkey, indicating that direct marketing was significantly more efficient than indirect marketing (Gokkaya and Akyuz, 2017).

Moreover, the term "Producer's Share in Consumer's Price" describes the dynamic and changeable portion of the consumer's Taka that goes to cheese producers. Producers' share and marketing efficiency are positively correlated. Just after direct marketing, cheese producers received higher percentage (74%) in Channel II (Table 3). This also aligned with the concept of "Higher the producer's share greater would be the marketing efficiency or vice versa". Approximately, 61% and 55% of the consumer price goes to Venezuelan and American cheese producers, respectively (Araque *et al.*, 2010; Bartlett, 1952). These findings are consistent with those of the current study.

In general, a higher producer share typically correlates with a smaller price spread, suggesting that producers keep a bigger percentage of the consumer price and middlemen take a lesser cut. From the Figure 2, it is realizable that price spread is less in Channel II for semi-hard cheese. For fresh cheese, which is exclusively distributed through Channel V, the price spread is the highest among all channels studied.

4. Conclusion

In the present study, both traditional and modern channels were identified to be involved in the marketing of cheese. From the marketing cost analysis, transportation and facility rent were identified to be the primary cost components for both wholesalers-cum-retailers and retailers, on the contrary outlet maintenance was the main cost component for supermarkets. The lowest price spread was associated with Channel II and the highest was associated with Channel V. Among the different marketing channels examined, Channel III was identified to be the most efficient channel following Channel IV and Channel II. Though most of the cheese producers use Channel I for marketing their cheese, there is a need to enhance the overall marketing efficiency to ensure a smoother flow from producers to consumers. This entails streamlining procedures, cutting down on inefficiencies, and assisting in improved communication between the different players in the marketing channel.

The demand for cheese in urban areas is extremely high and recently the demand is increasing in rural areas as well. If proper steps could be taken, cheese production could be a more viable commercial enterprise which in turn could play a dynamic role in overcoming the problems of low income, unemployment, undernutrition, and unfavorable balance of payment situation in the country. The government should put emphasis on this sector to improve the present constraints associated with cheese marketing.

References

- Al, T. W. E. (2021). Margin analysis and marketing efficiency of Dendrobium orchid plant. *Psychology and Education Journal*, 58(1): 194-209.
- Araque, Delgado, A., Armas, W., Albornoz, A., Espinosa, V. and Quijada, T. (2010). Márgenes de comercialización del queso artesanal de vaca en unidades de producción familiar en Totoremo, Venezuela Cesar. *Zootecnia Tropical/Zootecnia Tropical*, 28(3): 413–20.
- Banyte, J., Gudonaviciene, R. and Grubys, D. (2011). Changes in marketing channels formation. *Engineering Economics*, 22(3): 319-29.
- Bartlett, R. W. (1952). The behavior of marketing margins on dairy products. *Journal of Farm Economics*, 34(5): 922.
- Coughlan, A. T. (2010). *Marketing channel strategy*. In J. Sheth and N. Malhotra (Eds.). Wiley International Encyclopedia of Marketing.
- Dağdemir, V. (2000). A study on the determination of the marketing margin and manufacturing cost of tulum cheese in Erzincan City. *Turkish Journal of Agriculture and Forestry*, 24: 57-61.
- Das, T. (2019). The popular aarong cheese. The business standard. Available: <https://www.tbsnews.net/feature/food/popular-aarong-cheese>
- Davis, J. G. (2001). *Cheese: Volume iii manufacturing methods*. 1st edn: Churchill Livingstone: Fort Erie: ON, Canada.
- Gokkaya, G. S. and Akyuz, Y. (2017). A Study on the determination of marketing efficiency of traditional foods: the case of Kars Kashar Cheese. *Custos e @gronegocio on line*, 12: 310-25.
- Gómez-Huesca, I. L., Díaz-Rivera, P., Pérez-Hernández, P., Aguilar-Ávila, J. and Vilaboa-Arroniz, J. (2020). Characterization of stakeholders in the value chain and commercialization channels of string cheese in vega de alatorre, Veracruz, México. *Agro Productividad*, 13(9): 45-50.

Hasan, J. (2021). *Developing market value chain for mozzarella cheese: Blended finance investment for women's economic empowerment*. UNCDF. <https://www.uncdf.org/article/6651/developing-market-value-chain-for-mozzarella-cheese-blended-finance-investment-for-womens-economic-empowerment>

Ibrahim, F., Ruvio, S., Granlund, L., Salminen, S., Viitanen, M. and Ouwehand, A. C. (2010). Probiotics and immunosenescence: cheese as a carrier. *FEMS Immunology and Medical Microbiology*, 59(1): 53-59.

McElhatton, A. and El Idrissi, M. M. (2016). *Traditional Polish curd cheesewe*s. In P. Springer Link Content (Ed.), *Modernization of Traditional Food Processes and Products*. 1st edn: Springer U.S.: Imprint: Springer: Boston, MA. 4-12.

Merel, P. R. (2007). *Efficiency and redistribution in the french comte cheese market*. 103rd seminar, April 23-25, 2007. European Association of Agricultural Economists: Barcelona, Spain 9396.

Naufal, M., Salam, M., Saadah and Khatimah, H., 2021. "Analyzing the amount of banana Kepok marketing margin." In *IOP Conference Series: Earth and Environmental Science, Volume 681, International Conference on Environmental Ecology of Food Security, 30 March 2020, South Sulawesi, Indonesia*. IOP Publishing Ltd.

Petković, G. and Užar, D. (2020). Marketing channels in value creation and delivery of cheese in the Republic of Serbia. *Anali Ekonomskog Fakulteta U Subotici*, 43: 101–15.

Saadullah, M., 2001. "Smallholder dairy production and marketing in Bangladesh." In *Proceedings of a South-South Workshop held at National Dairy Development Board (NDDB), Annand, India*.

Sumners, C. (2017). *Spermidine-rich foods may prevent liver cancer, extend lifespan*. Texas A and M University: State of Texas. <https://today.tamu.edu/2017/04/20/say-cheese-spermidine-rich-foods-may-prevent-liver-cancer-extend-lifespan/>

Figures

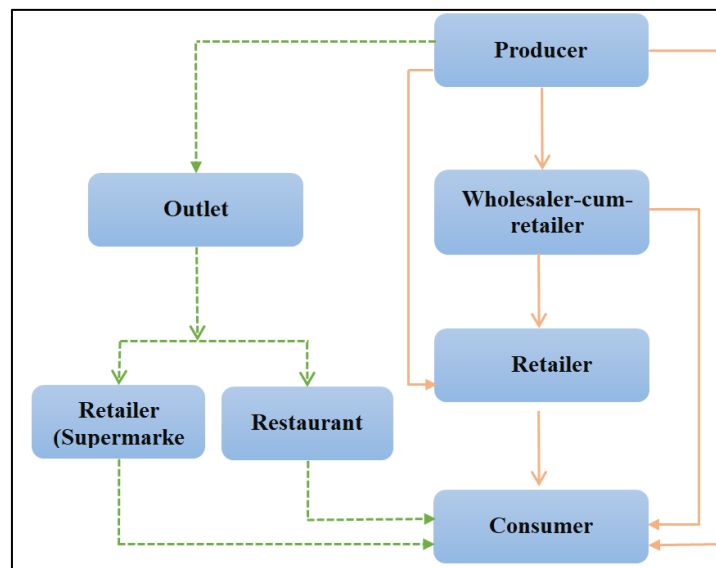


Figure-1. Marketing channels of cheese in some selected areas of Bangladesh

Notes:

Arrow indicates channel used for Fresh cheese
 Line arrow indicates channel used for Semi-hard cheese

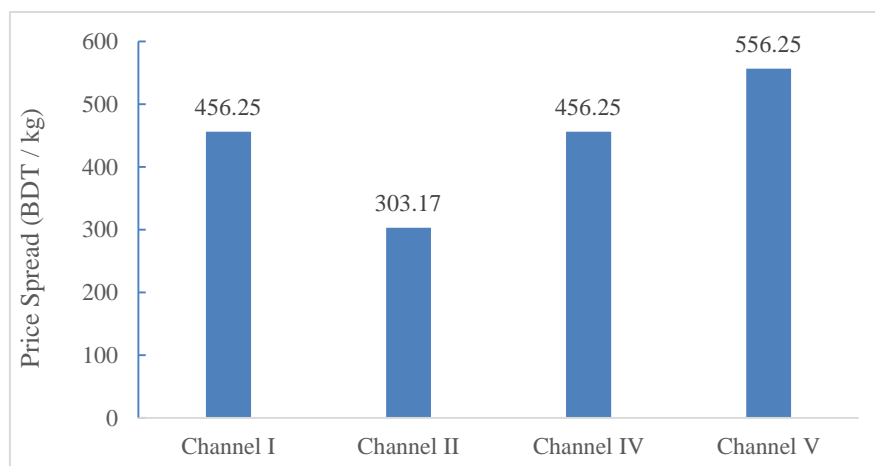


Figure-2. Price spread of different channels for cheese