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# The Moderating Effect of COVID-19 on the Promotion, Distribution and Sales of Dairy Products in Western India: An Exploratory Study

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## Abstract

**Purpose:** This study aims at exploring and understanding the effect of four independent variables related to dairy retail marketing and distribution (deep freezers, promotions, company support and distributor-retailer relationship) and one moderating variable Covid-19 lockdown on sales of dairy product during the Covid 19 pandemic situation. **Research design and methodology:** Personal interviews and door-to-door surveys and promotional tools were designed to publicise and collect data from the retailers. The sale data before, during and after promotion activity were all recorded and evaluated to draw an inferential conclusion. Factor analysis and multiple regression methods were adopted to analyses the data collected. **Results:** The research shows that four out of the five factors studied was found having significant impact on dairy retail sales. The highest impact on sales was contributed by promotions, secondly by the deep freezer impact followed by distributor-retailer relationship during the study period and lastly but not the least due to influence of Covid-19 lockdown. **Conclusions:** The study contributes to the body of knowledge in cold chain distribution process through utilization of right mix of tools and tactics for effective marketing and distribution of dairy products in developing countries especially during a pandemic situation.

**Keywords :** AMUL, ADF, COVID-19, Strategies, Sales Promotion, Retailers, Co-Operative.

**JEL Classification Code:** L81, M30, M31, M37, Q13

## 1. Introduction

Amul is unmistakably an “Amoolya” product. In Sanskrit, the word amoolya implies priceless or invaluable. Amul has earned hearts and market share as a highly loved Indian brand, having a presence in practically every product that can be created using milk. One of the reasons Amul is

such a great brand is because of its marketing mix. Amul is the creator of one of the most popular advertising mascots, the Amul girl, as well as one of the most memorable and long-running outdoor campaigns. Slogans and jingles are featured prominently in Amul hoardings and billboards, which are utilised to take a witty stance on current events. Each advertising, on the other hand, strikes the mark

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perfectly. A historical and mythical perspective is emphasised. India is perhaps the world's only country where cows are revered. It has the world's largest liquid milk consuming population, and milk and milk products are a vital part of its traditions (Landes, Cessna, Kuberka, & Jones, 2017). At this time, there is a noticeable increase in global demand, and the sector is globalising, expanding the breadth and intensity of global dairy commerce (Doupbrate, Hagevoort, Nonnenmann, Kolstrup, Reynolds, Jakob, & Kinsel, 2013).

Amul, the world's largest dairy company, has reported the slowest growth rate in the last eight years. According to this article, due to a reduction in worldwide milk prices, which has reduced the rate of revenue growth, Amul's growth has been the weakest in the previous eight years. The GCMMF had a revenue of INR 207.30 billion at the conclusion of the fiscal year, up 14.2 percent from the previous year. According to the managing director, R S Sodhi, the company's consumer product line expanded by 21%, but sales of bulk commodities dropped by 77%.

Amul processes 15.4 million litres of milk per day from Gujarat and other states. They want to raise the plant's total capacity by 14%, allowing it to handle 17.5 million litres of milk each day. "With our present development in setting Greenfield projects and expanding existing facilities, we should achieve a turnover of INR 250.00 billion (for the Amul brand) in 2015-16," Mr. R S Sodhi added. The dairy cooperative has been actively expanding the market for liquid milk under the Amul brand in new locations, as well as increasing the sale of value-added items to boost margins and profits. Amul has opted to focus only on SAARC and Middle Eastern nations in order to boost its export market, which plummeted by 53% last fiscal year, while in the domestic market, the business expects to build 1,000 retail outlets this fiscal year, increasing the total number of exclusive parlours in the country to 9,000. This year, it will add 900 wholesale distributors to its current 4,800 to expand its distribution network. Parmar stated in a statement on Saturday that during the shutdown in April, milk cooperatives affiliated with Amul sold 255 to 260 litres of milk per day, up 15% from April 2019.

After deciding to purchase milk from farmers who were previously not members of Amul's associated unions, the cooperative purchased processing units outside of Gujarat. All 18,600 milk producer unions and 3.5 million milk farmers have received Amul's safety guidelines. Amul has chosen to distribute INR 362.94 billion to milk farmer organizations, an increase of 7.78 percent over the previous fiscal year. Because of the move from modern trade to e-commerce or general trade, e-commerce sales have increased by more than doubling. As a result, they made the necessary changes to their distribution networks. For current trading, they have a different distributor.

Despite the countrywide lockdown enforced to limit the spread of COVID-19, the Gujarat Cooperative Milk Marketing Federation Limited (GCMMF), which offers its products under the brand Amul, has purchased new factories outside of Gujarat to process surplus milk collected from milk producers across the country. According to chairman Mr. Parmar, during the lockdown in April 2020, milk cooperatives affiliated with Amul sold about 255 to 260 litres of milk per day, which is 15% more than April 2019. Sales of paneer, ghee, butter, and packed milk have increased by 15 to 50 percent whereas, sales of few products i.e., ice cream and flavoured milk dropped by 85% and 70%. But overall sales and revenues of GCMMF increased manifold during the period.

This progressive developments at GCMMF with ever growing sales and expansion, even at the face of adversity like Covid-19 pandemic, is the basis of motivation of the present study. At this moment, some of the questions that arises in the mind of the author are: how is Amul brand sustaining its growth during the hard time; what marketing mix strategies, tools and techniques has the company adopted to achieve this? Therefore, the purpose of this study is to explore and analyse the factor/s that is/are positively influencing the sales of frozen dairy products with specific reference to Amul brands during Covid-19 scenario. The primary goal of this research is to identify the factors affecting Amul sales of products in Maharashtra by analysing the efficiency of the ADF (Amul Deep Freezer) as a promotional tool.

## 2. Review of Literature

To have a better grasp of international practices and methods, foreign literatures as well as literature on distribution were reviewed from various sources. Articles from various online journals, as well as business and financial papers, had been examined for various aspects of the country's distribution system.

Some marketers think of sales promotion as a supplement to advertising and personal selling since it connects the two and makes them more effective (Anderson, 1996). However, sales promotion is far more than an afterthought. In some organizations, sales promotion costs account for nearly 75% of the advertising/promotion budget, against 25% for advertising. It's costly to promote sales, nevertheless, its effective. Unfortunately, it has significant flaws that have resulted in heated debates in marketing circles between proponents of sales promotion and those who support advertising. Each has a critical role to play, but advertisers must weigh the benefits and drawbacks. The goals of sales promotion are aligned with the goals of marketing. They may, however, differ depending on the

target market and distribution channels. Retailers' goals may include carrying new things, repeating a new product or model, boosting off-season sales, persuading more potential customers, and so on. Despite the fact that sales promotion has several aims, there are three that are essential: informing, convincing, and reminding. People's attitudes about aspects of private label should be investigated in order to compete with manufacturer's brands.

To reap the benefits of increased popularity, the efficacy of promotional methods should be evaluated in order to produce the best of best promotional strategies. GCMMF expects its turnover to increase by 15% this fiscal year, after growing by 17% to INR 385.50 billion in 2019-20. Important marketing tactics include marketing mix and swot analysis. Products, place, pricing, and promotion are all part of the marketing mix. Strengths, weaknesses, opportunities, and threats are all part of the SWOT analysis. Strengths concentrate on the organization's internal advantages, while weaknesses concentrate on the organization's internal disadvantages. Opportunity emphasises on the company's external competitive advantage, while threat concentrate on the company's hurdles and prospective issues in the external environment. Fresh milk, milk powder, ghee, curd, paneer, ice cream, cream, cheese, chocolate, Yoghurt, Shrikhand (Indian sweet dessert of strained yogurt), sports health drink 'Stamina', Amul Pro, and butter are among the various items offered by Amul. Amul began with fresh liquid milk and has expanded its product line to include pizzas and desserts. They have always believed in having a positive relationship with their distributors and retailers because they are a cooperative society.

### 2.1. Promotions

Manufacturers and retailers increasingly see sales promotion as an important part of their marketing efforts (Bell & Drèze, 2002; Blattberg & Neslin, 1990; Manning & Sprott, 2007; Narasimhan, Neslin, & Sen, 1996; Pauwels, 2007). With their promotions, retailers intent to achieve three different benefits: boost sales of the promoted brands; increase sales of complementary products within a store; and increase in-store traffic (Kim & Staelin, 1999; Srinivasan, Pauwels, Hanssens, & Dekimpe, 2004). If implemented correctly, simple information provision-type promotions like as displays and "sale signs" can enhance short-term sales (Anderson & Simester, 2009; Inman & McAlister, 1994).

Amul adopted IBP (Integrated Brand Promotion). IBP is "the process of using a wide range of promotional tools working together to create widespread brand exposure" (O'Guinn, Allen, Scheinbaum, & Semenik, 2012). Various forms of advertising and media, as well as point-of-purchase promotions and displays, sales promotions (consumer and trade), public relations, personal selling, event sponsorships,

and corporate advertising, are among the tools and tactics available (Beard, 2015). The process and practice of IBP emphasizes that all the tools should be coordinated to deliver an integrated, cohesive message about a brand (Beard, 2015). IBP is the process of using a variety of promotional tactics to generate widespread brand awareness (O'Guinn, 2012). Consumers will have a hard time comprehending the brand and deciding whether or not to utilize it on a regular basis unless these numerous sorts of communication reach them. What role does IBP play in commercials and ad campaigns? IBP refers to the coordinated use of a variety of promotional tactics, such as advertising, to establish and sustain brand recognition, identification, and preference. Marketers can develop an integrated brand promotion by combining contests, a website, event sponsorship, and point-of-purchase displays with advertisements and advertising campaigns (O'Guinn, 2012). Non-personal channels of transmitting a message to the wider audience, primarily the national newspaper, radio, television, magazines, and billboards, are classified as advertising in mass media.

In comparison to non-monetary promotions, monetary promotions provide less brand awareness. According to Rothschild & Gaidis (1981), monetary promotions are less effective in generating brand knowledge than non-monetary promotions because monetary promotions focus on a single brand association (i.e. price).

### 2.2. Amul Deep Freezers

The firm provides deep freezers to its shops for keeping frozen items in accordance with retailer freezer programs. Western, BlueStar, Voltas, Carrier, and other firms manufacture Amul Deep Freezers (ADF). Size, cooling, model, and servicing facilities all varied amongst the ADFs. Needless to say, freezers are the most important equipment for the storage and sales of ice-cream and other frozen dairy products. Amul has launched the "Humara Apna Deep Freezer" scheme for retailers. In this scheme, if the retailers buy deep freezers through Amul, they get free Ice creams which worth as per the size of the deep freezer booked. For example, if a retailer books a deep freezer of 400litre capacity, it costs him around INR 27000, and under this scheme the retailer gets Ice cream worth rupees 10000 free. The payment of INR 27000 has to be done at the time of delivery of the deep freezer and the free Ice creams gets delivered to the retailer within 45 days.

### 2.3. Distributor-Retailer Relationship

In the distribution of goods, the quality of customer service is a major factor in competition. When marketing fast-moving consumer goods, distributors and retailers often have limited possibilities for differentiation using price and promotion (Lemmink, Wetzels, & Koelemeijer, 1996;

Zhang, Vonderembse, & Lim, 2003). Retailers, distributors and branded manufacturers in the fast-moving consumer goods industry have adopted efficient response system. According to a study conducted Kurt Salmon Associates (1993), a retail management consulting business, optimizing the supply chain through the use of Efficient customer response (ECR) would result in a total savings of 10.8% of retail price. Manufacturers were expected to get 54 percent of the savings, with distributors and retailers receiving the remaining 46 percent. Efficient consumer response aids in the development of interfirm knowledge-sharing protocols that allow for the transfer, recombination, and generation of specialised information. Both explicit and tacit information is exchanged and new knowledge is developed via collaborative experiences (Inkpen, 1996). Efficient customer response is likely to aid the supplier in developing partner-specific absorptive capacity to absorb vital information from a certain retailer (Lane & Lubatkin, 1998).

#### **2.4. Company Support**

Profitability, assortment, consumer value, manufacturer attributes, initial marketing allowances, tactical considerations, price, and storage space needs were highlighted as essential to retail customers by Nilsson's (1977) study. The relevance of the manufacturer's reputation and size, brand name, pricing, selling history, delivery, and mark-up to department-store purchasers was underlined by Wagner, Ettenson, and Parrish (1989) highlighted the importance of the manufacturer's reputation and size, brand name, price, selling history, delivery and mark-up to department-store buyers. Manufacturer brands thus allow retailers to enhance their competitive advantage through improving sales volume, participating in trade promotions (Murry & Heide, 1998), using price premiums to improve margins (Boulding, Kalra, Staelin, & Zeithaml, 1993) and developing the product category. Manufacturer brands therefore have the potential to deliver a range of benefits to retailers. Manufacturer support, the second benefit noted, was considered by retailers to be vital. Retailers commented that "a brand rarely sells by itself" and there was an expectation that manufacturers would not only have consumer brand advertising support but also support the retailer advertising programme. This support extended to the provision of market trend information and collaboration on shelf layouts (Glynn, Brodie, & Motion, 2012).

Changes in retailing have made it more difficult for manufacturers to manage their brands. The challenge for manufacturers is to understand how changes such as retail and distribution consolidation, internet retailing and the creation of buying groups impact on their brands. Often a small number of retailers account for a large proportion of a brand's revenue which means that retailer brand decisions

can influence both manufacturer performance and consumer purchasing (Farris & Ailawadi, 1992). Wagner et al. (1989) highlighted the importance of the manufacturer's reputation and size, brand name, price, selling history, delivery and mark-up to department-store buyers. (Baldauf, Cravens, & Binder, 2003) demonstrated that brand awareness and loyalty can influence resellers' perception of a brand's profitability and marketplace performance.

According to Graf (1986), the dairy business faces a slew of issues, including stagnating pricing, rising costs, surplus, trailing per capita consumption, subsidized imports, an unfavourable international market, and copycat dairy products. Consumers in India are eating more fat than ever before, yet animal fat is being consumed at a lower rate. Dairy product surpluses and resulting lower pressure on dairy product pricing reflect the transition to counterfeit dairy products. Imitation cheese is the most dangerous counterfeit product for the dairy sector. The average retail price of fake cheese is 16 to 32 percent less than the price of actual cheese. To address the issue of mimicry, the following solutions were advised at corporate level: 1. Negotiate a lower price for imported casein to reduce export subsidies. 2. Ensure that fake dairy products are clearly labelled and visible. 3. Focus on higher-margin blends, which compete more directly with margarine than butter. 4. Promote cheese with more of the annual promotion funds collected from farmer checkoffs.

#### **2.5. COVID-19 Effect**

Studies from Addo, Jiaming, Kulbo, and Liangqiang (2020); Kim (2020), and Wiranata and Hananto (2020), reported that in the context of the fear-inducing COVID-19 phenomenon, impulse buying behaviour had increased significantly across the world. Medicines, drugstores, and food are increasingly bought in brick-and-mortar stores (Eger, Komárková, Egerová, & Mičík, 2021), meanwhile, sporting goods and hobbies-related product purchase frequencies are getting lower along with electronics and household equipment (Timotius & Octavius, 2021). According to Shamim, Ahmad, and Alam (2021), consumers prefer packaged items and tend to avoid unpackaged items, quick and efficient shopping, and shifting towards online shopping and utilizing digital payments.

### **3. Research Methodology**

The study of the relationship between retailers and distributors, as well as the ADF concept and its impact on sales during the pandemic, is the focus of the research. AMUL retailers in the twin cities of Pune and Pimpri



Chinchwad were contacted and discussed on the factors that assist them determine their distributor relationship in a focus group. The study focuses on promotional techniques moderated by Covid-19 lockdown, as well as Amul Deep Freezers (ADF), which AMUL provides to distributors and retailers for product storage. Only Amul items should be stored in these deep freezers, which are believed to be 100 percent pure. Number of ADFs in each retail location, ADF manufacturing company, Model type, Filling Rate or Usage, Capacity, Servicing, Promotional Stickers, and Schemes are some of the factors covered in the study, which are measured using open ended questions.

The data collecting study procedure was carried out from primary and secondary sources. Primary data is collected via survey using a well-designed questionnaire with appropriate scales of measurement for the variables to be studied. A pre-test study was conducted before the final questionnaire in order to decide which variables will be included in the final questionnaire. The 'attitude' of respondents was tested on multiple aspects since the study's goal is to analyse relationships. Respondents gave their feedbacks on a 5-point Likert scale. Individuals pick one of five options on a Likert Scale. Personal interviews with distributors and certain retailers were conducted. The inputs from the interviews were inculcated in the questionnaire. Data was collected from primary source with an estimated sample size of 212 merchants in Maharashtra's Pune and Pimpri Chinchwad cities. Convenient sampling method was used to collect the data. The acquired data was coded into an appropriate format, and then Factor Analysis and Multiple Regression Analysis were performed.

## 4. Data Analysis

Editing and coding techniques are used to turn raw data into information, which is then transformed into more relevant information using descriptive statistics in SPSS 19.0. The co-relationship between the variables was assessed before moving on to factor analysis.

### 4.1. Matrix of Correlation

None of the variables are significantly correlated, according to the correlation matrix estimation. All of them have a modest correlation. It indicates that the variables are ready to be factor analysis. As the KMO value 0.890 is larger than 0.5, it may be assumed that the factor analysis was effective and significant (Boyd, Walker, Mullins, & Larreche, 2002). It can be shown in the Communalities Table 1 that out of 17 variables, 5 may be selected since the eigenvalues are bigger than 1. These 5 variable accounts for

62.97 percent of the total shared variation among the 17 independent variables.

As a result, at this time, we restrict the number of components to five. all the other variables were observed to have loadings more than 0.5. As a result, the factors have significantly extracted the variation in all variables, hence

no variable has to be eliminated, and the factor model is performing well for them.

**Table 1:** Eigenvalues of the Correlation Matrix

	Eigenvalue	% of Variance	Cumulative
1	8.33	49.002	49.002
2	1.327	7.809	56.811
3	1.047	6.156	62.967
4	0.834	4.907	67.873
5	0.700	4.118	71.991
6	0.639	3.761	75.752
7	0.585	3.441	79.193
8	0.564	3.316	82.509
9	0.458	2.694	85.203
10	0.445	2.621	87.823
11	0.388	2.283	90.106
12	0.33	1.941	92.047
13	0.325	1.913	93.96
14	0.291	1.712	95.672
15	0.266	1.566	97.237
16	0.246	1.447	98.684
17	0.224	1.316	100.00

Table 2 highlights five elements to consider while researching Amul's frozen chain management system. Following factor analysis, the influence of these 5 variables on retail outlets' weekly sales was investigated using Multiple Regression using the same 212 data.

**Table 2:** Factor Loadings of Measurement Items

Variables	Factor Loading
<b>Factor 1. ADF Impact</b>	
1. Number of Amul Deep Freezers per store	0.73
2. capacity of Amul Deep Freezers	0.81
3. visibility of Amul Deep Freezers	0.71
4. Competitor freezer's visibility	0.66
5. Competitors' product visibility in	0.70
<b>Factor 2. Distributor-Retailer Relationship</b>	
1. Timely Response	0.66
2. Handling of return goods by distributor	0.60
3. Quality of supply	0.67
<b>Factor 3. Promotions</b>	
1. Adequate Promotional tools	0.76
2. New Posters for new products	0.75
3. Media ads: Radio and re-telecast	0.76
<b>Factor 4. Company Support</b>	
1. Right Quantity in sealed packets	0.78
2. Standard Color of Ice creams	0.76
3. Amul Brand association	0.75

<b>Factor 5. Covid-19 lockdown</b>	
1. Increase demand of packaged foods	0.60
2. Rely on Trusted brand and safety	0.58
3. Impulse buying due to supply uncertainty	0.67

In Table 3, the F statistics have been utilized to explain the ANOVA results, and as a result, the regression model that has been utilized is significant at a level of significance of 5%, as  $Pr > F.0007$ . This emphasizes the possibility of running a regression model.

**Table 3:** Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Value	Pr>F
Model	5	5093577793	1018715559	3.298	.007
Error	206	1362183587	6612541.68		
Collected Total	211	6455761380			

The R square value in Table 4 indicates that the variance explained by the model (i.e., containing all significant independent variables) in the dependent variable is 74.35 percent. Aside from that, the adjusted R square is quite near to the R square, indicating that the number of irrelevant factors examined for the research is extremely small (Boyd, et al., 2002).

Factors 1, 2, 3, and 5 are all significant at the 5% level of significance, according to the parameter estimate in Table 5 and especially the  $Pr > |t|$  values. However, at a 5% level of significance, factor 4, which is Company Support, was not found as a significant factor. As a result, the regression equation may be written as follows:

$$\text{Weekly Sales} = 0.12234 \text{ Factor 1 (ADF concept)} + 0.07332 \text{ Factor 2 (Distributor-Retailer Relationship)} + 0.29310 \text{ Factor 3 (Promotions)} + 0.11506 \text{ Factor 5 (Covid-19 Lockdown)} \text{ (standardized regression equation).}$$

**Table 4:** R Square Value

Root MSE	Dependent Mean	Coeff Var	R-Square	Adj R-Sq
2,571.486	7866.3915	21.2843	0.7435	0.652

The above equation explains that for a unit change in the ADF variable (Factor 1), there will be a weekly sales increase by 0.12234 for every unit change. Likewise for every unit change in Factor 2 (Distributor-Retailer

Relationship), there will be an increase of 0.07332 units in sales, for unit change in Factor 3 (Promotions), there will be 0.29310 increase in sales; and finally, 0.11506 increase of sales due to Factor 5 (Covid-19 Lockdown).

The VIF (Variance Inflation) values for these variables are less than the cut-off value of 5, and the tolerance values are also more than the minimal cut-off limit of 0.1, showing that all of the components are suggesting low multicollinearity.

## 5. Findings and Conclusion

**Factor Analysis Results:** From 17 variables, 5 factors were identified - the ADF Impact, the Distributor-Retailer connection, Promotional Activities, Company Support, and the Covid-19 lockdown scenario. As a result, the highest increase of sales was due to the influence of promotions, secondly due to the deep freezer impact, followed by Covid-19 Lockdown influence and the least influence on sales was from distributor-retailer relationship. Thus, suggesting that four factors out of the five taken for the study was found to have significant impact on Amul retail sales during the pandemic lockdown periods. Similarly, company support does have some influence on sales though not significant according to the findings. As a result, the organization should prioritize these aspects in order to boost sales.

Deep freezers are preferred by most retailers. The most common complaint from retailers is that deep freezer manufacturers provide inconsistent service. Except for Kwaliti Walls, most shops do not store rivals' deep freezers. Amul is behind its rivals in the impulse range, which includes cones, sticks, and cups. When it comes to impulsive purchases, most people go for cup ice creams. The most popular flavours are vanilla and butterscotch. Custard apple and coffee are the least popular flavours. Other than custard apple and coffee tastes, stores often keep a backup supply of vanilla. Retailers carry Amul's ice cream because of the company's reputation for outstanding quality and flavour. Because of the limited variety of Amul ice cream and the lack of attractive promotional efforts in this segment, stores do not choose to stock them. This coupled with closure of Amul ice cream parlours during lockdown impacted

**Table 5:** Parameter Estimates

Variable	DF	Parameter Estimate	Standard Error	t Value	Pr >  t	Standardized Estimate	Tolerance	Variance Inflation
Intercept	1	-4287.6894	1049.3569	-4.0860	0.0008	0		
FACTOR 1	1	654.4030	228.5896	2.8628	<.0001	0.12234	0.9087	1.1046
FACTOR 2	1	439.0997	255.9237	1.7157	0.0282	0.07332	0.9159	1.0786
FACTOR 3	1	912.3025	133.0155	6.8586	0.0004	0.29310	0.9064	1.1024
FACTOR 4	1	367.1795	253.0884	1.4508	0.0912	-0.06200	0.9653	1.0256
FACTOR 5	1	767.1262	284.9318	2.6923	<.0001	0.11506	0.9574	1.1257

negatively on the sales of ice-cream. The company support factor was not found having significant impact on the sales of the retailers. The reason behind can be attributed towards the incrimination of the company for focusing their major support in promoting the ice cream as this product line was not doing well currently. But as observed during the surveys with the retailers, Amul ice-creams were less preferred as compared to other competitors' brands and secondly due to lack of proper logistics and service support system hindered largely due to the lockdown

Around 78 percent of retailer prefer to have Amul Ice Creams in their stores because they believe in the brand and the customer's confidence in the store. Despite the fact that ice cream is typically eaten in the summer, Amul maintains its sales throughout the year. Even though they have a competitor's deep freezer, most of the stores in Pune's old city region remain loyal to the firm and store Amul's products in it. During the fieldwork, it was discovered that there were well-educated retailers who, after retiring from their previous job, decided to start this business in order to keep themselves busy.

## 6. Recommendations and Suggestions

GMCCF and its distribution channels should maintain its effective promotional strategy and the deep freezer scheme. Nevertheless, the company should also give more stress on improving its distributor-retailer relationship and intensify support by building a more responsive, collaborative and efficient supply chain management. A proper program should be planned for increasing the penetration of its ice-cream business which is not performing well. The company should seek out retired old people to open small ice cream shops to boost sales while also benefiting the elderly; this will help the company's social marketing. Because ice cream parlours account for just 5-10% of all retail outlets, the corporation needs to create additional locations to increase sales. Refrigerators and deep freezers aren't often used in distribution vehicles. As a result, by the evening, most of the ice cream businesses have received melted ice cream. Consequently, distributors should ensure that deep freezers are utilized in delivery vehicles, or else each journey will take no longer than four hours. Even the sealed boxes sometimes contain less stuff than expected. This is something that both the company and the distributors should be aware of since it creates a sense of mistrust in the mind of retailers. They don't deliver stocks to stores on schedule. To prevent damage during transit, in the first place, necessary precautions and measures should be undertaken. The company should send out posters to distributors on schedule and promote new items aggressively.

The firm should come up with initiatives to encourage merchants to preserve glass top models as far as possible. Customers can look through the top of the freezer and get a better picture of what's within, as well as establish a point of sale (Balagtas & Kim, 2007). Because ADF is not free, retailers often opt to maintain Kwality Walls deep freezers as its free. There are around 17% of retail shops that do not have ADF. To encourage merchants to maintain ADF, the corporation could devise enticing rules or plans. Around 32% of ADF merchants worry about haphazard maintenance by the ADF producers; the company should strengthen its service facilities. The greatest method to maximize ADF's promotional potential is to position it in such a way that it draws customers. Around 28% of businesses have complained about not getting promotional free ice cream at all, against what's been mentioned in ADF policy, while 26% have only got half free ice cream. The firm should investigate this situation and finish any projects that have not yet been completed. This research assisted in determining the main aspects to consider while examining the cold chain system and measuring the efficacy of the company's wide distribution system. With regard to enhancing promotional effectiveness, constant innovative ideas need to be adopted as per the changing need of the marketing environmental factors. In view of keeping people indoor during covid, BARC (Broadcast Audience Research Council), announced the re-telecast of most popular Indian television series of late 1980s - Mahabharat (98 weekly episodes) and Ramayana (78 weekly episodes) in the evening and morning bands which eventually resulted in a roughly 40,000 percent increase in viewership in the week ending April 3, 2020. The two epics drew the most viewers, making Doordarshan, India's most popular channel. "Consumers are not present-oriented. "Consumers are not living in the present. Past and future escapes are how the consumers are dealing with the lockdown," according to a Tonic Worldwide survey. Therefore, a suggestion with reference to effective promotions could be to air advertising messages during these peak hours of viewership (which will be even more during the lockdown periods) on TV channels (Kelly, Halford, Boyland, Chapman, Bautista-Castaño, Berg, & Summerbell, 2010).

## 7. Limitations and Future Research

The study aided in determining the different key aspects to consider while examining Amul's cold chain management. It was also examined to what extent these elements have an influence on the company's weekly sales. This will aid in making suitable selections while considering all variables. Several of the previously stated insights were gathered via considerable field work and will aid the organization in

improving its distribution network and improving management. Additionally, it aids in the analysis of numerous supply, distribution, storage, and promotion-related elements impacting Amul Ice Cream sales in Pune and Pimpri Chinchwad. The research comprises doing a purity check and examining the significance of deep freezers as a promotional tool in boosting impulsive purchasing at retail outlets, as well as exploring the impact of ADF (Amul Deep Freezer) on sales. Aside from that, the research aids in gaining information into a retailer's impression of its distributor and the elements that influence that impression. The comprehensive field study assisted in identifying the reasons for the merchants' devotion to the firm. The survey will also aid in the identification of prospective shops interested in carrying Amul products. Without a doubt, the study has some noteworthy limitations, absolute sales estimates gathered from shops may be overstated. Covering all retail shops in the twin cities was not feasible due to time constraints and lockdown situation. On the basis of the retailers' judgment level, an ADF purity check was performed. Because of the unresponsive character of certain retailers or people's predisposition to respond to socially desirable responses, an error may occur. Despite the fact that consumer eating patterns have changed dramatically, ice cream is still regarded a dessert or a side dish by Indian consumers. Increased consumer discretionary income, as well as an increase in the number of purchasers who choose the impulsive sector, are pushing market actors to perform better. In India, the ice cream sector is facing a number of issues. In semi-urban and rural locations, poor infrastructure, a lack of sufficient cold storage, and power supply challenges are all major concerns for companies looking to expand. The participants are up against competition from not just their direct rivals, but also from other food businesses. One limitation of the present study might be the lack of highly structured methodology due to the absence of solid hypothesis/es as the study is based on a mixture of exploratory and quantitative as well. The findings of this study should be taken forward in future research as an input for more rigorous test and examination of the research objectives/hypotheses in the related field.

## References

- Addo, P. C., Jiaming, F., Kulbo, N. B., & Liangqiang, L. (2020). COVID-19: fear appeal favoring purchase behavior towards personal protective equipment. *The Service Industries Journal*, 40(7-8), 471-490. <https://doi.org/10.1080/02642069.2020.1751823>
- Anderson, E. T., & Simester, D. I. (2009). Price cues and customer price knowledge. *Handbook of Pricing Research in Marketing*, 150-166. <https://doi.org/10.4337/9781848447448.00016>
- Anderson, R. E. (1996). Personal selling and sales management in the new millennium. *Journal of Personal Selling and Sales Management*, 16(4), 17-32. <https://doi.org/10.1080/08853134.1996.10754071>
- Balagtas, J. V., & Kim, S. (2007). Measuring the effects of generic dairy advertising in a multi-market equilibrium. *American Journal of Agricultural Economics*, 89(4), 932-946. <https://doi.org/10.1111/J.1467-8276.2007.01037.X>
- Baldauf, A., Cravens, K. S., & Binder, G. (2003). Performance consequences of brand equity management: Evidence from organizations in the value chain. *Journal of Product & Brand Management*, 12(4), 220-236. <https://doi.org/10.1108/10610420310485032/FULL/XML>
- Beard, F. (2015). Forgotten classics: The Business of Advertising, by Earnest Elmo Calkins (1915). *Journal of Historical Research in Marketing*, 7(4), 573-583. <https://doi.org/10.1108/JHRM-06-2015-0017/FULL/XML>
- Bell, D., & Drèze, X. (2002). Changing the Channel: A Better Way To Do Trade Promotions. *MIT Sloan Management Review*, 43(2).
- Bhatnagar, A. & Ratchford, B. (2004). "A Model of Retail Format Competition for Non-durable Goods", *International Journal of Research in Marketing*, Vol 21(1), pp 39-59.
- Blattberg, R. C., & Neslin, S. A. (1990). *Sales promotion : concepts, methods, and strategies*. Prentice Hall.
- Birthal, P.S. (2008). Linking smallholder livestock producers to markets: Issues and approaches. *Indian Journal of Agricultural Economics*, 63(1): 19-37.
- Boulding, W., Kalra, A., Staelin, R., & Zeithaml, V. A. (1993). A Dynamic Process Model of Service Quality: From Expectations to Behavioral Intentions. *Journal of Marketing Research*, 30(1), 7-27. <https://doi.org/10.2307/3172510>
- Boyd, H. W., Walker, O. C., Mullins, J., & Larreche, J.-C. (2002). *Marketing management : a strategic, decision-making approach*. McGraw-Hill.
- Burt, Steve & Davies, Keri (2010). "From the Retail Brand to the Retailer as a Brand: Themes and Issues in Retail Branding Research", *International Journal of Retail & Distribution Management*, 38(11-12), 865-878
- Corstjens, Marcel & Lal, Rajiv (2000). "Building Store Loyalty through Store Brands", *Journal of Marketing Research*, 37(3), 281-289.
- Del Vecchio, Devon, Henard, David H. & Freling, Traci H. (2006). "The Effect of Sales Promotion on Post-Promotion Brand Preference: A Meta-Analysis", *Journal of Retailing*, 82(3), 203-213.
- Douphrate, D. I., Hagevoort, G. R., Nonnenmann, M. W., Kolstrup, L. C., Reynolds, S., Jakob, M. & Kinsel, M. (2013). The Dairy Industry: A Brief Description of Production Practices, Trends, and Farm Characteristics Around the World. *Journal of Agromedicine*, 18(3), 187-197. <https://doi.org/10.1080/1059924X.2013.796901>
- Eger, L., Komárková, L., Egerová, D., & Mičík, M. (2021). The effect of COVID-19 on consumer shopping behaviour: Generational cohort perspective. *Journal of Retailing and Consumer Services*, 61, 102542. <https://doi.org/10.1016/J.JRETCONSER.2021.102542>
- Farris, P. W., & Ailawadi, K. L. (1992). Retail power: monster or mouse? *Journal of Retailing*, 68(4), 351-369.
- Glynn, M. S., Brodie, R. J., & Motion, J. (2012). The benefits of



- manufacturer brands to retailers. *European Journal of Marketing*, 46(9), 1127–1149. <https://doi.org/10.1108/03090561211247856>
- Graf, T. F. (1986). Effect of Imitation or Filled Dairy Products. *Journal of Dairy Science*, 69(5), 1462–1469. [https://doi.org/10.3168/JDS.S0022-0302\(86\)80556-2](https://doi.org/10.3168/JDS.S0022-0302(86)80556-2)
- Inkpen, A. C. (1996). Creating Knowledge through Collaboration. *California Management Review*, 39(1), 123–140. <https://doi.org/10.2307/41165879>
- Inman, J. J., & McAlister, L. (1994). Do Coupon Expiration Dates Affect Consumer Behavior? *Journal of Marketing Research*, 31(3), 423–428. <https://doi.org/10.2307/3152229>
- Juttner, U. (2005). Supply chain risk management: Understanding the business requirements from a practitioner perspective. *International Journal of Logistics Management*, 16(1), 120–141.
- Kaur, R., Banga, G., Kumar, B., Kapur, S. & Singla S.K. (2008). “Visual Merchandise and Store Design Strategies of Specialty Retail Stores”, *Indian Retail Review*. 2(1), 327–348.
- Kelly, B., Halford, J. C. G., Boyland, E. J., Chapman, K., Bautista-Castaño, I., Berg, C., & Summerbell, C. (2010). Television food advertising to children: A global perspective. *American Journal of Public Health*, 100(9), 1730–1736. <https://doi.org/10.2105/AJPH.2009.179267>
- Kim, B. (2020). Effects of social grooming on incivility in COVID-19. *Cyberpsychology, Behavior, and Social Networking*, 23(8), 519–525. <https://doi.org/10.1089/CYBER.2020.0201>
- Kim, S. Y., & Staelin, R. (1999). Manufacturer allowances and retailer pass-through rates in a competitive environment. *Marketing Science*, 18(1), 59–76. <https://doi.org/10.1287/MKSC.18.1.59>
- Kurt Salmon Associates. (1993). *Efficient consumer response : enhancing consumer value in the grocery industry*. Washington, DC: Research Dept., Food Marketing Institute.
- Landes, M., Cessna, J., Kuberka, L., & Jones, K. (2017). *India's Dairy Sector: Structure, Performance, and Prospects*. U.S. Department of Agriculture, Washington.
- Lane, P. J., & Lubatkin, M. (1998). Relative absorptive capacity and interorganizational learning. *Strategic Management Journal*, 19, 461–477. [https://doi.org/10.1002/\(SICI\)1097-0266\(199805\)19:5<461:AID-SMJ953>3.0.CO;2-L](https://doi.org/10.1002/(SICI)1097-0266(199805)19:5<461:AID-SMJ953>3.0.CO;2-L)
- Lemmink, J., Wetzels, M., & Koelemeijer, K. (1996). Manufacturer-Distributor Relationships and Channel Service Quality. *The International Journal of Logistics Management*, 7(2), 33–42. <https://doi.org/10.1108/09574099610805502>
- Manning, K. C., & Sprott, D. E. (2007). Multiple unit price promotions and their effects on quantity purchase intentions. *Journal of Retailing*, 83(4), 411–421. <https://doi.org/10.1016/J.JRETAI.2007.03.011>
- Murry, J. P., & Heide, J. B. (1998). Managing promotion program participation within manufacturer-retailer relationships. *Journal of Marketing*, 62(1), 58–68. <https://doi.org/10.2307/1251803>
- Narasimhan, C., Neslin, S. A., & Sen, S. K. (1996). Promotional elasticities and category characteristics. *Journal of Marketing*, 60(2), 17–30. <https://doi.org/10.2307/1251928>
- Nilsson, J. (1977). Purchasing by Swedish grocery chains. *Industrial Marketing Management*, 6(5), 317–328. [https://doi.org/10.1016/0019-8501\(77\)90057-8](https://doi.org/10.1016/0019-8501(77)90057-8)
- O’Guinn, T., Allen, C., Scheinbaum, A. C., & Semenik, J., R. (2012). *Advertising and Integrated Brand Promotion* (6th ed.). Mason, OH: Cengage Learning.
- Pauwels, K. (2007). How retailer and competitor decisions drive the long-term effectiveness of manufacturer promotions for fast moving consumer goods. *Journal of Retailing*, 83(3), 297–308. <https://doi.org/10.1016/J.JRETAI.2006.03.001>
- Rothschild, M. L., & Gaidis, W. C. (1981). Behavioral Learning Theory: Its Relevance to Marketing and Promotions. *Journal of Marketing*, 45(2), 78. <https://doi.org/10.2307/1251666>
- Shamim, K., Ahmad, S., & Alam, M. A. (2021). COVID-19 health safety practices: Influence on grocery shopping behavior. *Journal of Public Affairs*, 21(4). <https://doi.org/10.1002/PA.2624>
- Srinivasan, S., Pauwels, K., Hanssens, D. M., & Dekimpe, M. G. (2004). Do promotions benefit manufacturers, retailers, or both? *Management Science*, 50(5), 617–629. <https://doi.org/10.1287/MNSC.1040.0225>
- Timotius, E., & Octavius, G. S. (2021). Global Changing of Consumer Behavior to Retail Distribution due to Pandemic of COVID-19: A Systematic Review. *Journal of Distribution Science*, 19(11), 69–80. <https://doi.org/10.15722/JDS.19.11.202111.69>
- Wagner, J., Ettenson, R., & Parrish, J. (1989). Vendor selection among retail buyers: An analysis by merchandise division. - PycNET. *Journal of Retailing*, 65(1), 58–79.
- Wiranata, A. T., & Hananto, A. (2020). Do Website Quality, Fashion Consciousness, and Sales Promotion Increase Impulse Buying Behavior of E-Commerce Buyers? *Indonesian Journal of Business and Entrepreneurship*, 6(1), 74–85. <https://doi.org/10.17358/ijbe.6.1.74>
- Zhang, Q., Vonderembse, M. A., & Lim, J. S. (2003). Manufacturing flexibility: defining and analyzing relationships among competence, capability, and customer satisfaction. *Journal of Operations Management*, 21(2), 173–191. [https://doi.org/10.1016/S0272-6963\(02\)00067-0](https://doi.org/10.1016/S0272-6963(02)00067-0)