Conagra - Table Spreads Analysis

Group 1 - Predictive Analytics Project

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1 Introduction

Butter and margarine are two of the most commonly used food products, having a significant impact on the food industry. In this report, we aim to analyze the current market trends and provide recommendations to Conagra Brands to accelerate growth and optimize their portfolio within the Table spreads category.

Our research indicates that the prices of butter and margarine have reached an all-time high post-pandemic, with butter being more expensive than margarine due to various factors such as increasing feed costs and a labor shortage in the dairy industry. Consequently, we have identified a greater opportunity in the margarine segment for future growth. Furthermore, Conagra's brands have already captured a 27.63% market share in the margarine segment with 69 different UPCs.

This report offers a detailed analysis of the margarine market, focusing on the top 5 brands and Conagra's brands. It covers market trends, key players, drivers, and growth opportunities for Conagra.

Our report addresses the following key questions:

1) Are there any interactions across Conagra brands that pose a risk and/or opportunity for Conagra?
2) What are the most effective areas of merchandising that could increase sales?
3) Are there any gaps in the current portfolio that could improve Conagra's market position?

2 Data Overview

Below are some summary statistics we want to point out through this report.

Current market share of top brands and Conagra brands in the Margerine category:

Brand	Sales in $ Millions	Market Share in %	Change in Market share from 2018 to 2022
COUNTRY CROCK	2,232M	32.46	7.13 ▲
I CAN'T BELIEVE ITS NOT BUTTER	1,373M	19.96	- 0.84 ▼
BLUE BONNET	757M	11.01	-2.48 ▼
IMPERIAL	577M	8.40	1.76 ▲
SMART BALANCE	535M	7.79	-1.38 ▼
EARTH BALANCE	357M	5.19	0.48 ▲
PARKAY	250M	3.64	-0.61 ▼
Others	794M	11.55	-4.06 ▼

Table 2.1 Brand Market Share Summary

Form	Market Share in %
TUBS	76.33
STICKS	12.81
ALL OTHER FORM	5.68
SPRAY/SQUEEZE	5.17

Table 2.2 Market Share by Form

It is worth noting that tubs hold a major share of the margerine market. We decided to narrow down our analysis to the tubs category to identify insights.

Brands	45 OZ	30 OZ	15 OZ	16 OZ	13 OZ	Other OZ	Total Sales
COUNTRY CROCK 44 UPCs	1,120M Value	31M Value	540M Value			442M	2,133M
I CAN'T BELIEVE ITS NOT BUTTER 29 UPCs	296M Premium/ Mainstream	34M Premium	730M Premium/ Mainstream		345K Premium	38M	1,099M
SMART BALANCE 23 UPCs	148M Premium		249M Premium		115M Premium	21M	534M
BLUE BONNET 16 UPCs	222M Value		102M Value	305.659 Value			324M
EARTH BALANCE 22 UPCs	3M Premium		174M Premium		118M Premium	14M	309M
IMPERIAL 8 UPCs	139M Value		8M ~~Value~~			1M	147M
PARKAY 8 UPCs				52K Mainstream	18M Mainstream	44M	63M
Others	124M	2M	343M	26M	14M	65M	575M
Total Sales	2,052M	67M	2,147M	2,26M	266M	635M	

Table 2.3 Tubs Sales by Brands and Tires with UPCs

To summarize, in the 45 Oz market, Country Crock's products hold a dominant position in sales, whereas in the 15 Oz market, I Can't Believe It's Not Butter's products are the top-selling ones. What stood out to us was that I Can't Believe It's Not Butter has the second-highest sales despite having only 26 UPCs. We wanted to analyze if data on merchandising can help us explain these results.

Brand	No Merch	Any Merch	Total	% Sales from Merch	Avg % of Discount
COUNTRY CROCK	1,888M	344M	2,232M	15%	8.99
I CAN'T BELIEVE ITS NOT BUTTER	1,035M	338M	1,373M	25%	8.47
BLUE BONNET	643M	114M	757M	15%	8.60
IMPERIAL	519M	59M	577M	10%	8.26
SMART BALANCE	463M	72M	535M	13%	11.87
EARTH BALANCE	312M	45M	357M	13%	9.41
PARKAY	223M	27M	250M	11%	9.78
Others	678M	116M	794M	15%	6.82

Table 2.4 Merchandising

We found that I Can't Believe It's Not Butter makes 25% of its sales through product merchandising. Additionally, Smart Balance tends to offer higher average discounts (2%) compared to other brands in this segment.

3 Models

The following basic regression models are used to accurately evaluate the data.

3.1 Model 1

We set up the below model to investigate if there is any competition between Conagra's two similar products, Smart Balance and Earth Balance. Both products are in the premium category and offer tubs of similar sizes. Our goal was to determine whether there is a possibility of one product taking away sales from the other, which is called cannibalization.

$$EB\_WeeklySales = \beta_0 + \beta_1\ EB\_Avg\_Price + \beta_2\ SB\_Avg\_Price + \beta_3\ EB\_Avg\_Price^2$$

EB_WeeklySales = Weekly Sales of the Earth Balance
EB_Avg_Price = Average Price per Volume of Earth Balance
SB_Avg_Price = Average Price per Volume of Smart Balance
EB_Avg_Price² = Average Price per Volume of Earth Balance Sq

3.2 Model 2

We set up the below model to find out if Conagra's product lineup could be improved. We analyzed the effect of various tub sizes on sales in different regions and price tiers. The aim was to identify opportunities for introducing new tub sizes or capitalizing on popular ones. We discovered that some tub sizes in certain regions and price tiers had minimal impact on sales, while others were more influential.

$$Weekly\_Sales = \beta_0 + \beta_1\ Week + \beta_2\ Price\_Vol + \beta_3\ Price\_VolAM + \beta_4\ Avg\_Price\_VolSq + \beta_5\ Fifteen\_OZ + \beta_6\ Thirteen\_OZ + \beta_7\ Thirty\_OZ + \beta_8\ FortyFive\_OZ + \beta_9\ Sixteen\_OZ$$

Weekly_Sales = Weekly Sales of the Brand
Week = Week of the Year
Fifteen_OZ = Fifteen Oz Product
Thirty_OZ = Thirty Oz Product
Sixteen_OZ = Sixteen Oz Product
Price_Vol = Average Price per Volume
Price_VolAM = Average Price per Volume Any Merch
Avg_Price_VolSq = Average Price per Volume Square
FortyFive_OZ = Forty-Five Oz Product
Thirteen_OZ = Thirteen Oz Product

The table displays the sales contribution of different tub sizes across various regions and tiers. If a tub size is not significantly contributing to weekly sales in a specific region and tier, it is marked with an "X." Grey cells indicate that the product is not sold in that region.

IRI Region	Tier	15 Oz	45 Oz	13 Oz	16 Oz	30 Oz
California	MAINSTREAM				X	X
	OTHERS	X		X	X	
	PREMIUM			X		
	VALUE					
Great Lakes	MAINSTREAM					X
	OTHERS					
	PREMIUM			X		
	VALUE					
Mid	MAINSTREAM					
	OTHERS					
	PREMIUM			X	X	X
	VALUE	X				X
Northeast	MAINSTREAM					
	OTHERS					

	PREMIUM					
	VALUE	X				X
Plains	MAINSTREAM		X			
	OTHERS	X				
	PREMIUM	X				
	VALUE					
South Central	MAINSTREAM					
	OTHERS					
	PREMIUM					
	VALUE	X				
South East	MAINSTREAM	X				
	OTHERS					
	PREMIUM					X
	VALUE					X
West	MAINSTREAM					X
	OTHERS	X		X	X	
	PREMIUM					
	VALUE					

Table 3.1 Tubs by Region by Oz

3.3 Model 3

We wanted to determine the most effective areas of merchandising that could increase sales. Based on our findings that I Can't Believe It's Not Butter generates 25% of its sales through merchandising and has most of its products in the premium segment, we hypothesized that merchandising in the premium tier could give the brand an advantage. To test this hypothesis, we created the following model:

$$\mathbf{Weekly\_Sales = \beta_0\ Week + \beta_1\ CC + \beta_2\ BB + \beta_3\ ICBINB + \beta_4\ EB + \beta_5\ SB + \beta_6\ PAR + \beta_7\ Price\_Vol + \beta_8\ Price\_VolAM + \beta_9\ Avg\_Price\_VolSq + \beta_{10}\ MerchDummy + \beta_{11}\ PREMIUM + \beta_{12}\ MAINSTREAM + \beta_{13}\ OTHERS + \beta_{14}\ Fifteen\_OZ + \beta_{15}\ Thirteen\_OZ + \beta_{16}\ Thirty\_OZ + \beta_{17}\ FortyFive\_OZ + \beta_{18}\ Sixteen\_OZ + \beta_{19}\ MERCH\_P + \beta_{20}\ MERCH\_M + \beta_{21}\ MERCH\_O}$$

Weekly_Sales = Weekly Sales of the Brand
Week = Week of the Year
CC = Country Crock
BB =Blue Bonnet
ICBINB = I Can't Believe It's Not Butter
EB = Earth Balance
SB = Smart Balance
PAR = Parkay
Fifteen_OZ = Fifteen Oz Product
Thirty_OZ = Thirty Oz Product
Sixteen_OZ = Sixteen Oz Product
MERCH_M = Merchandising in Mainstream tier
Price_Vol = Average Price per Volume
Price_VolAM = Average Price per Volume Any Merch
Avg_Price_VolSq = Average Price per Volume Square
MerchDummy = Merchandising Dummy
PREMIUM = Premium Tier
MAINSTREAM = Mainstream Tier
OTHERS = Other Tire (SuperPremium & TBD)
Thirteen_OZ = Thirteen Oz Product
FortyFive_OZ = Forty-Five Oz Product
MERCH_P = Merchandising in Premium tier
MERCH_O = Merchandising in Others tier

4 Results and Recommendations

Below are result summaries from our models:

- We found that in the 15 oz category, there is a correlation between the average price of Earth Balance and the weekly sales of Smart Balance. When Earth Balance's price goes up, Smart Balance's sales go down, and vice versa. This suggests that Earth Balance is taking market share away from Smart Balance. On the other hand, in the 45 oz category, both products compete, and when one product's price increases, the sales of the other product decrease. We believe that Conagra is already aware of this, but if not, we want to bring it to their attention.
- During our analysis, we noticed an unexpected result when examining the average price per volume. The coefficient of average price was positive for Smart Balance, while it was negative for Earth Balance, which was not what we expected. Further investigation revealed that Earth Balance has a higher average price per volume in all tub sizes compared to the average price per volume in the premium category. Conversely, Smart Balance has a lower average price per volume in all tub sizes. If this pricing strategy is not intentional, it presents an opportunity for Smart Balance to increase its price and potentially generate more sales for Conagra.
- Parkay is a mainstream brand that offers various tub sizes, including 10.5 oz, 13 oz, 13.4 oz, 16 oz, 41 oz, and 48 oz. Similarly, the value brand, Blue Bonnet, only offers 13 oz, 15 oz, and 45 oz sizes. However, neither brand currently offers a 30 oz tub size. Introducing a 30 oz tub under the Parkay brand could potentially boost weekly sales in the Great Lakes, Mid, Northeast, Plains, South Central, and Southeast regions. Similarly, introducing a 30 oz size for Blue Bonnet in California, Great Lakes, Plains, and West regions could be a viable option. We strongly recommend introducing a 30 oz size in the Plains region under either or both brands to potentially improve sales.
- We have found that merchandising in the Premium segment is the second most effective way to increase sales, following the Value segment. It is reasonable to assume that merchandising helps, and if any form of merchandising is implemented in the Premium segment, it has a greater influence on sales compared to the Mainstream and Super Premium Tiers.

An area of opportunity

During our research, we discovered that the high prevalence of lactose intolerance worldwide has been a significant driver of margarine sales. Approximately 70% of the world's population is lactose intolerant, and in the US, this figure stands at around 36%. Studies indicate that African American and Asian ethnicities have a lactose intolerance prevalence rate of 75% to 95%. We sense that this section of the population can contribute more to the sales of margarine. Unfortunately, we were unable to obtain specific data to include in our analysis. Nevertheless, we believe that targeting markets with high lactose intolerance through a strategic approach could potentially increase Conagra's margarine sales.