5. Comparing our company(OO) data with other company(PP):

i. The sold quantity of each product in each region:

Team O:

MATERIAL_CODE	(Multiple Items)			
SALES_ORGANIZATION	OO			
Sum of QUANTITY_DELIVERED	**Column Labels**			
Row Labels	**North**	**South**	**West**	**Grand Total**
Milk	915	473	692	2080
Yoghurt	675	653	471	1799
Butter	293	450	234	977
Cheese	132	65	488	685
Ice Cream	254	143	210	607
Cream	70	119	42	231
Grand Total	**2339**	**1903**	**2137**	**6379**

Team P:

MATERIAL_CODE	(Multiple Items)			
SALES_ORGANIZATION	PP			
Sum of QUANTITY_DELIVERED	**Column Labels**			
Row Labels	**North**	**South**	**West**	**Grand Total**
Milk	1807	800	1160	3767
Yoghurt	594	573	693	1860
Cream	329	380	279	988
Butter	304	303	244	851
Ice Cream	267	198	155	620
Cheese	198	133	128	459
Grand Total	**3499**	**2387**	**2659**	**8545**

As you can see, team P sold more products in total than team O. Team O sold in total of 6379 products, while team P sold 8545 products in total. Team P sold more Milk, Yoghurt, Cream, and Ice Cream in total. Team P sold more units of Milk and Cream in each region than team O. Team P was particularly strong in the North region, where they sold more of every product except yoghurt than team O.
Team O was more competitive in the South, where they sold more yogurt and butter than team P.

ii. The Revenue of each product in each region:

MATERIAL_CODE	(Multiple Items)			
SALES_ORGANIZATION	OO			
Sum of NET_VALUE	**Column Labels**			
Row Labels	**North**	**South**	**West**	**Grand Total**
Butter	19984.48	30655.8	16018.2	66658.48
Cheese	12336.18	6065.8	45578.25	63980.23
Milk	26070.08	13449.2	19761.84	59281.12
Yoghurt	21187.02	20438.21	14832.82	56458.05
Ice Cream	12984.62	7393	10804.11	31181.73
Cream	5781.89	9865.77	3450.51	19098.17
Grand Total	**98344.27**	**87867.78**	**110445.73**	**296657.78**

MATERIAL_CODE	(Multiple Items)			
SALES_ORGANIZATION	PP			
Sum of NET_VALUE	**Column Labels**			
Row Labels	**North**	**South**	**West**	**Grand Total**
Milk	48048.68	19373.51	28514.75	95936.94
Cream	24760	28484.78	21188.26	74433.04
Butter	19000.42	19043.24	15430.71	53474.37
Yoghurt	15956	15634.79	18402.89	49993.68
Cheese	16774.68	11236.8	10826.8	38838.28
Ice Cream	12152.46	9071.54	7089.7	28313.7
Grand Total	**136692.24**	**102844.66**	**101453.11**	**340990.01**

As you can see, Team P had higher total revenue than team O. Team P revenue is 340,990.01, while team O revenue is 296,657.78, the difference is quite big, however team O has higher gross margin than team P. Team O had more revenue for Butter in all regions. Team P had higher revenue for Milk and Cream in all regions. Team P had higher revenue for all products in the South region, except for Yoghurt and Butter. Overall, Team P had a higher revenue for more products in most regions, while Team O had a higher revenue for butter in all regions.

iii. The Net Income of each product in each region:

The winning company **OO** earned the greatest money of **$41,257.03**, while the losing company **PP** earned the least **$16,848.80**.

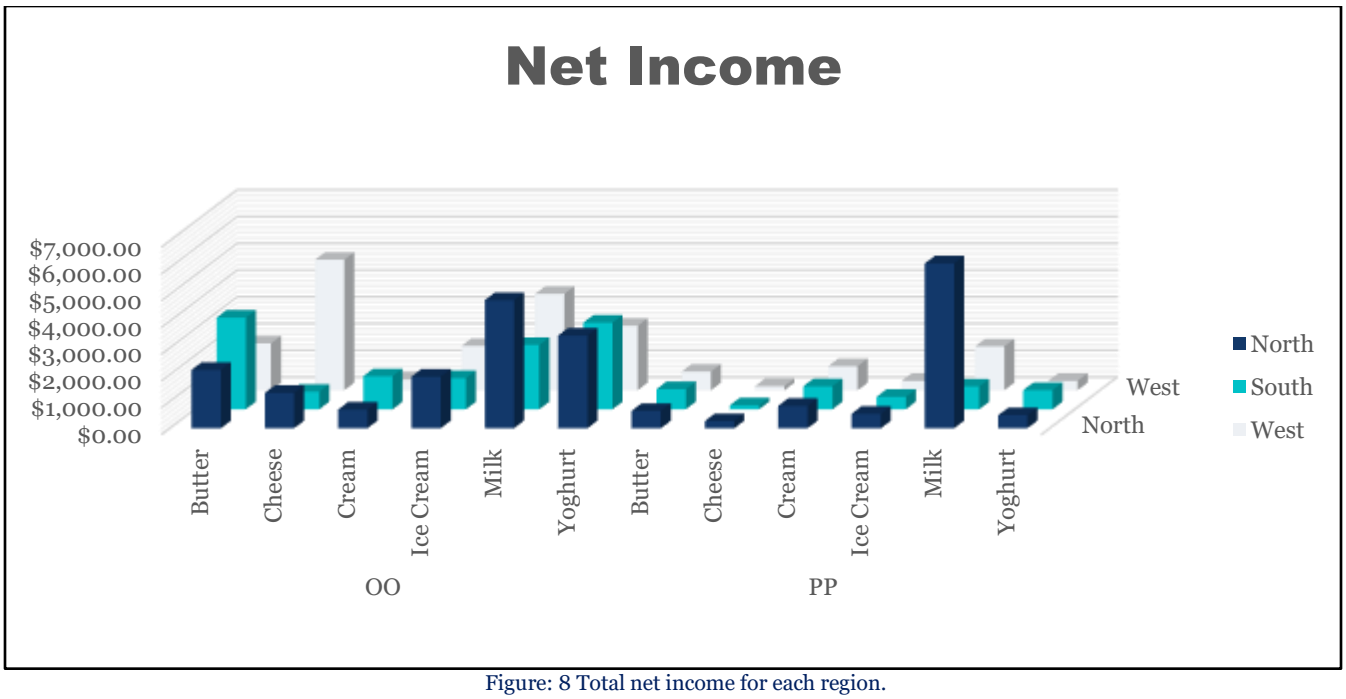

Figure: 8 Total net income for each region.

OO, our company's flagship product, has a remarkable consistency in profitability throughout all three areas. The bars indicating their performance fluctuate but remain stable, demonstrating their durability and consistent income generating. PP's product line, on the other hand, is mediocre, with flat and irregular earnings. Their financial path is unstable across most items, except for their milk variant, which stands out as the top earner in the North area.

Figure 9 reveals a comprehensive investigation of the calculating methods used to derive the net income for each product. The net income calculation involves subtracting the cost of products from the net value of the relevant commodity, providing a detailed picture of the profitability of each product within specified locations.

Sum of Net Income	Column Labels			
Row Labels	North	South	West	Grand Total
OO	**$14,405.07**	**$12,132.55**	**$14,719.41**	**$41,257.03**
Butter	$2,184.22	$3,426.72	$1,754.54	$7,365.48
Cheese	$1,325.22	$655.18	$4,880.82	$6,861.22
Cream	$700.52	$1,234.53	$405.30	$2,340.35
Ice Cream	$1,933.64	$1,164.71	$1,657.38	$4,755.73
Milk	$4,793.60	$2,407.47	$3,605.39	$10,806.46
Yoghurt	$3,467.87	$3,243.94	$2,415.98	$9,127.79
PP	**$8,959.87**	**$3,792.36**	**$4,096.57**	**$16,848.80**
Butter	$651.91	$755.35	$698.49	$2,105.75
Cheese	$267.88	$147.90	$153.10	$568.88
Cream	$839.50	$856.76	$900.94	$2,597.20
Ice Cream	$542.94	$465.26	$352.20	$1,360.40
Milk	$6,167.52	$850.76	$1,639.81	$8,658.09
Yoghurt	$490.12	$716.33	$352.03	$1,558.48
Grand Total	**$23,364.94**	**$15,924.91**	**$18,815.98**	**$58,105.83**

Figure: 9 Total net income for each region.

iv. Analysis on Purchase Order created during the game:

We were informed prior to the game that exceeding 4,000 in product inventories will result in taxes and penalties for the business we own. As a result, we took great care in the first round to stay inside this boundary. Our company reordered products on three occasions to meet demand. With these actions, our plant did not generate any penalty charges due to inventory overstock. Inventory levels were kept under 4,000 units every day. See below table figure 10 with a list of all purchase orders and product quantities. In the first occasion, we started with a higher inventory for most of all products with milk and yogurt being that highest of orders in comparison with second and third occasion the demand deteriorated to only purchasing Yogurt, Milk and Butter.

	01						02						03		
	Butter	Cheese	Cream	Ice Cream	Milk	Yoghurt	Butter	Cheese	Cream	Ice Cream	Milk	Yoghurt	Butter	Milk	Yoghurt
4500000052	600	664	650	420	950	715									
4500000054	163	90	47	43	247	256									
4500000059							202	224	46	191	684	595			
4500000064													87	199	337

Figure: 10 purchase order & quantity of each product.

v. Daily inventory for six dairy products for our company OO and the company PP:

Daily Stock Inventory for Company OO:

The Company PP has the highest product sold compared to all other companies. We wanted to check how many days the inventory went to zero for both company OO (ours) and Company PP. Before calculating the zero inventory stocks for both companies, we checked the daily stock inventory for the company OO and Company PP.

Below is the summarization of stock for the company OO for three different regions and three different Rounds. We used Highlight tables to show the stock. The darker color indicates the zero to low stocks and the light color indicates the more to average stocks in the inventory.

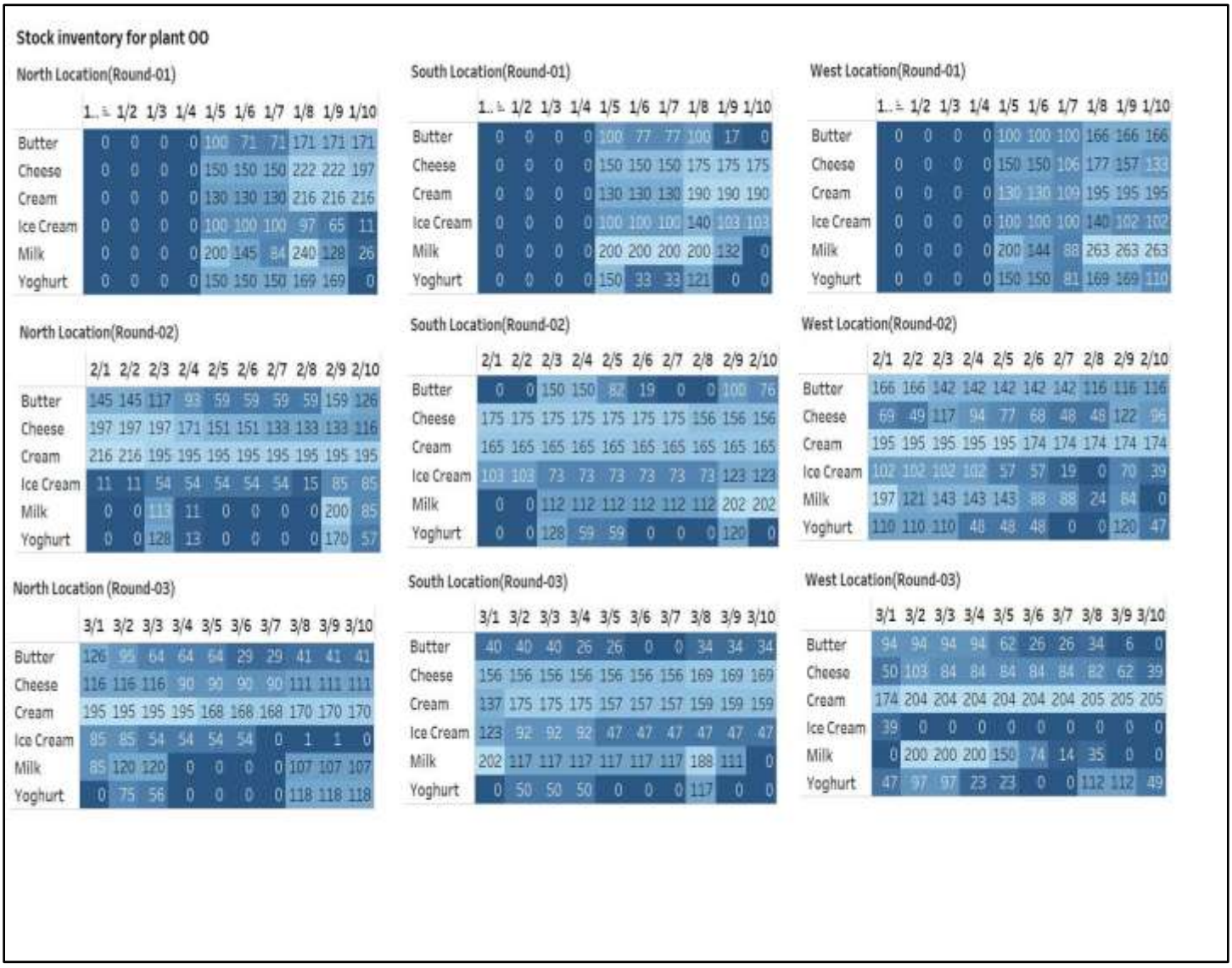

Figure: 11 Stock inventory of company OO for all 3 regions and for all rounds

From the above the figure 11 we can see that the **company OO had good stocks in our inventory**. Our inventory was zero for the initial few days in Round-01 and stocked up in the upcoming days. And we can see that our inventory didn't go to zero often in the middle of rounds 2 and round 3. Only the **product Milk and Yoghurt stocks went below in round -02 and round 03.**

Daily Stock Inventory for Company PP:

We checked the stock inventory for the Company PP, to understand their company's stock plan. We used Highlight tables to show the stock. The darker color indicates the zero to low stocks and the light color indicates the more to average stocks in the inventory.

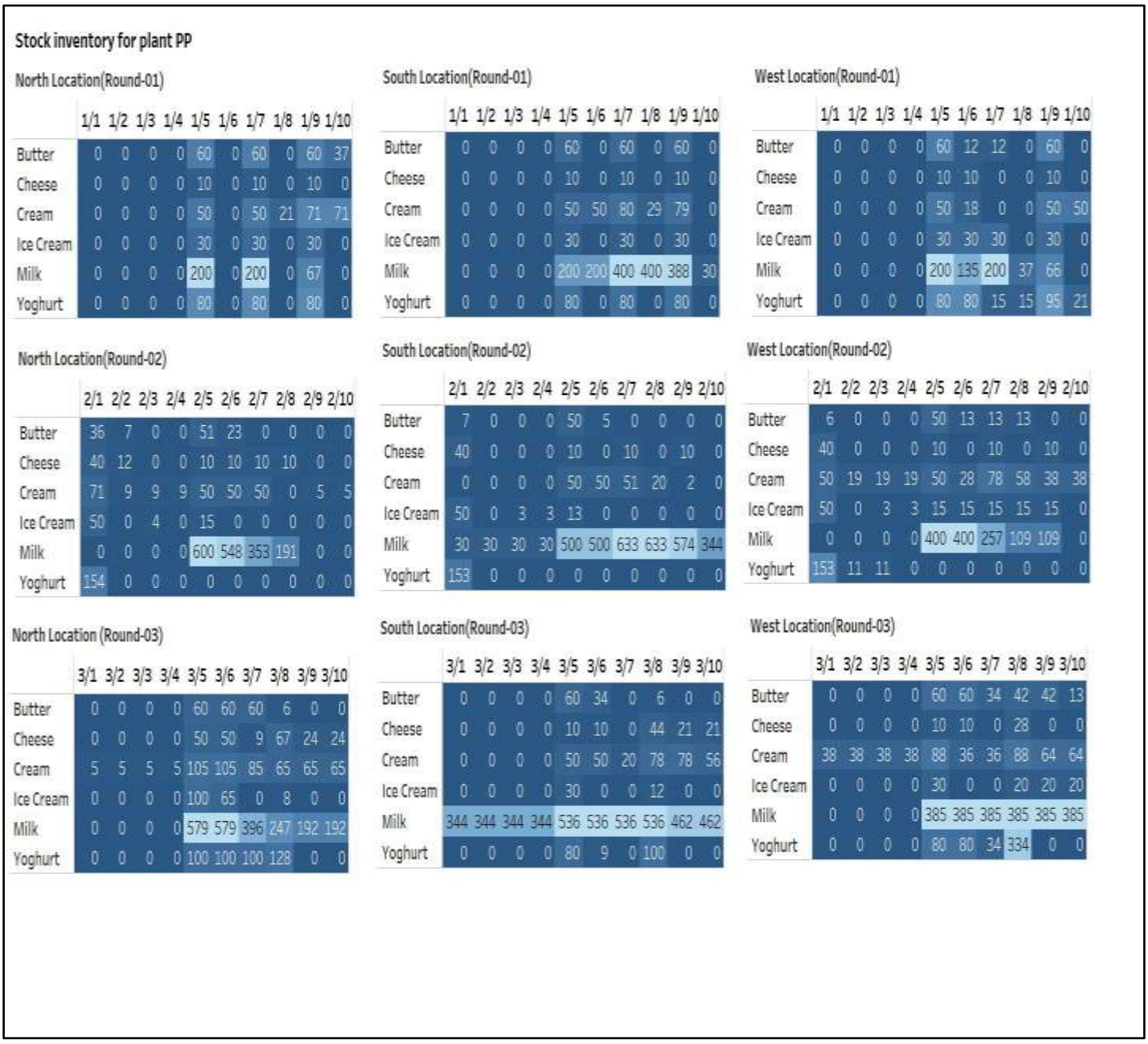

Figure: 12 Stock inventory of company PP for all 3 regions and for all rounds

From the above figure 12, we can see that company PP stocks were not enough; they had zero stocks on most of the days in round 02 and round 03. Especially for the products, cheese**, yoghurt, their stocks were low and went to zero stock often.**

We used **Line chart** to show the Stock trend between our Company OO and the Company PP for three rounds in three different Regions (North, South, West).

Line chart to compare the daily stock in the Inventory between the company OO and PP

Round -01 of daily stock inventory:

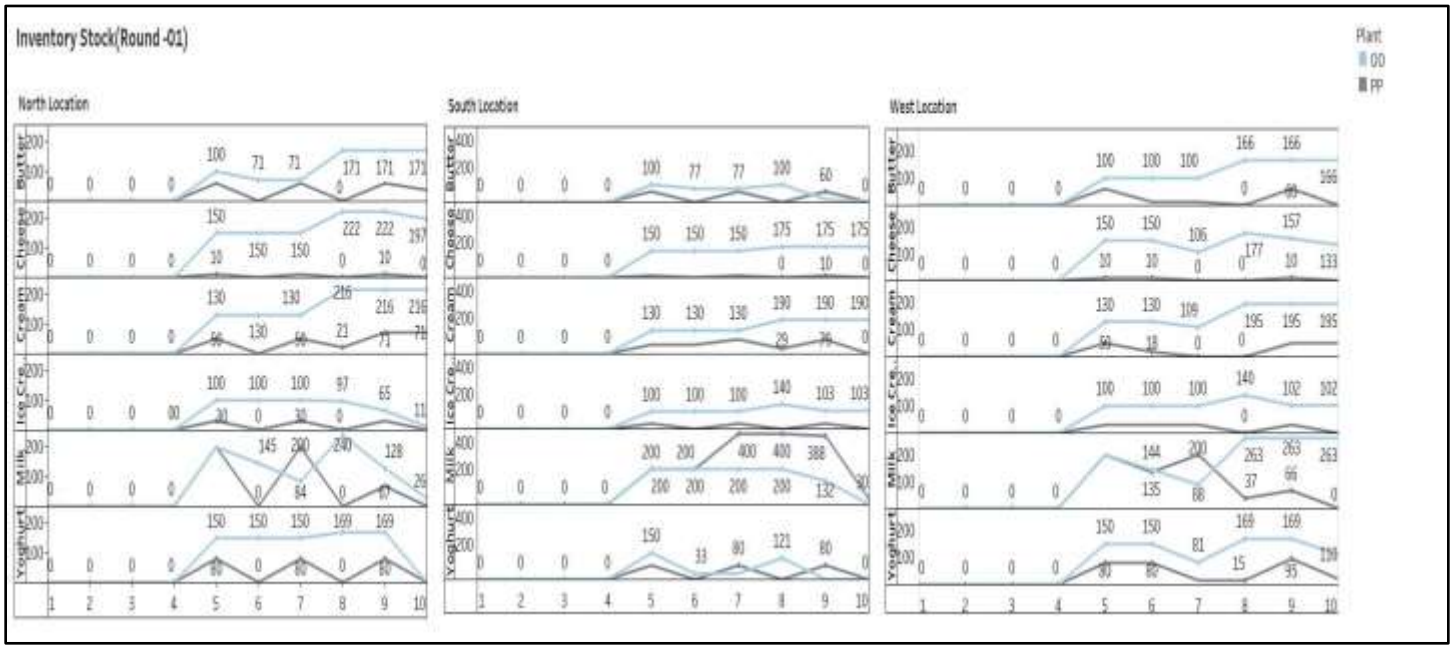

Figure: 13.1 Stock inventory of company OO and PP for all 3 regions in round-01

From Figure :13.1, Round-01, we can see that our company OO the stocks in the inventory were increasing, only at the end of round-01 graph declined, which shows that we maintained good stock inventory in round-01, compared to the company PP, where they missed to monitor the stocks in the inventory.

Round -02 daily stock inventory between the company OO and the company PP:

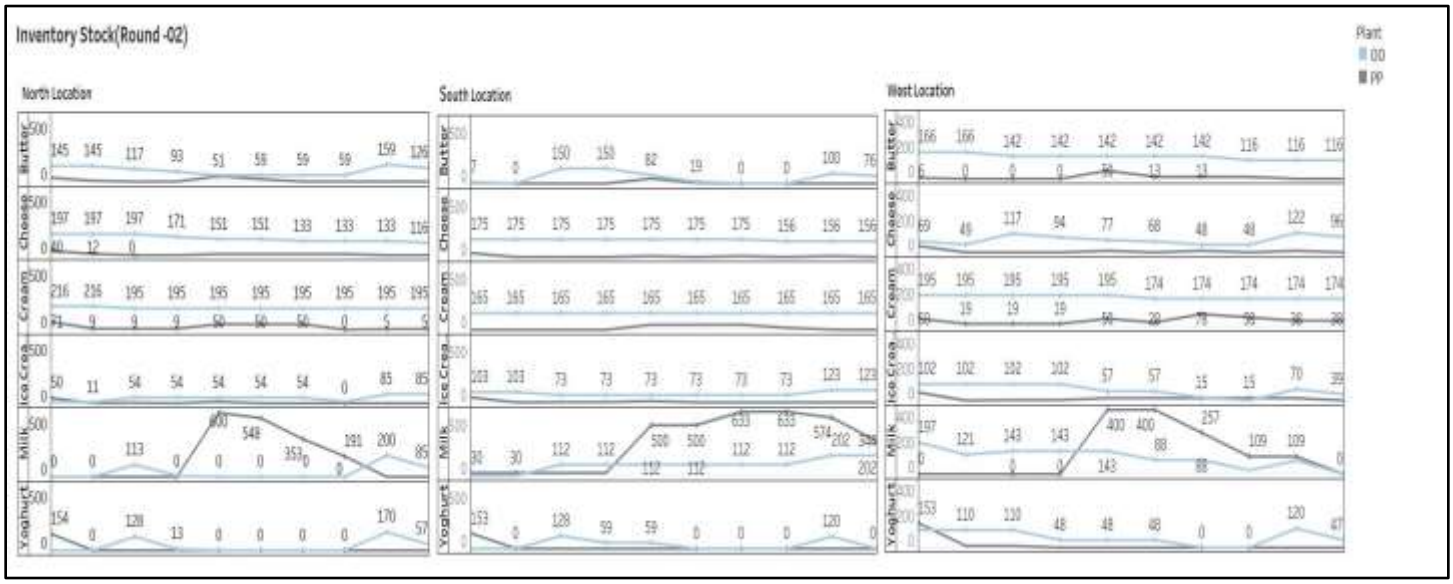

Figure: 13.2 Stock inventory of company OO and PP for all 3 regions in round-02

From Figure:13.2 round-02, the company OO stocks of yoghurt were less, the inventory was zero for only some of the days in all location, whereas for company PP, the stocks like yoghurt, butter, milk had zero inventory for most of the days in location North and some days in all the other region.

Round -03 daily stock inventory between the company OO and the company PP:

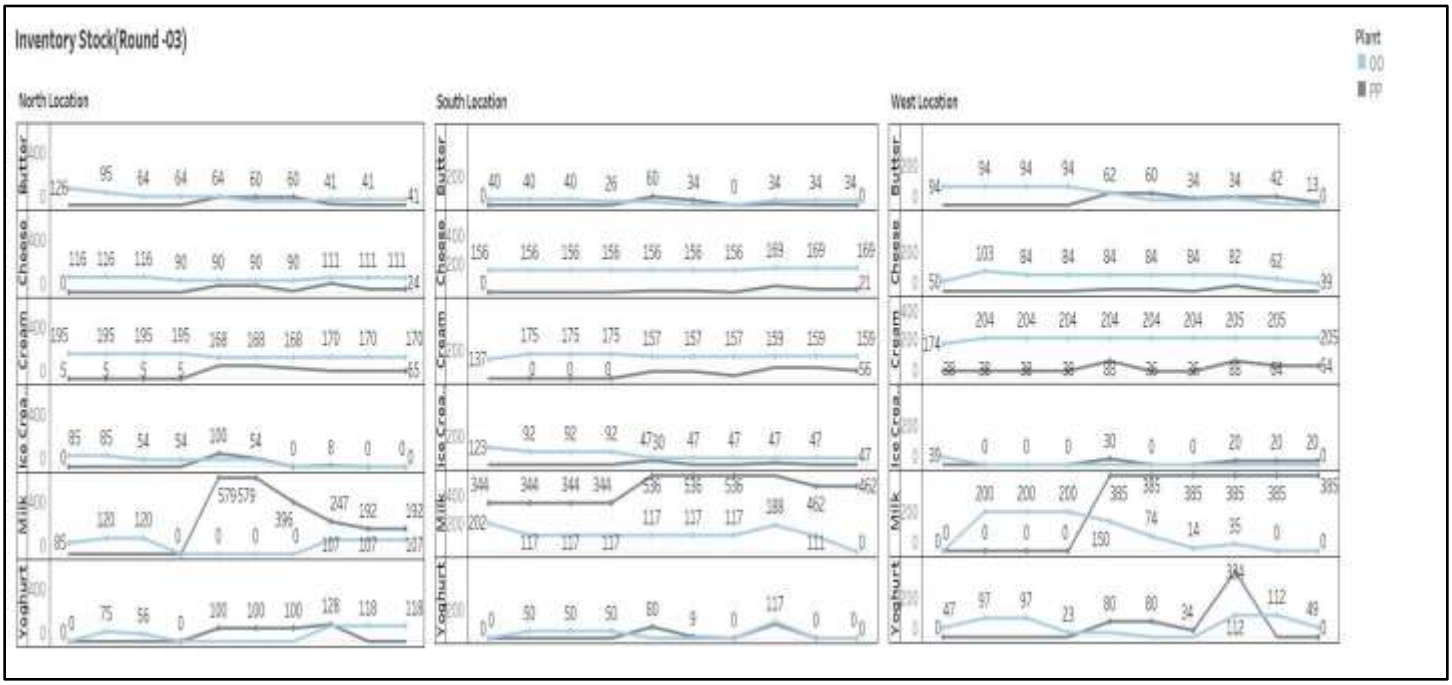

Figure: 13.3 Stock inventory of company OO and PP for all 3 regions in round-03

As we can see from the Figure :13.3 the company PP had not enough stock in the inventory at the beginning of the game in round –03, and also, we can see that except Milk and cream they didn't have more stocks on other dairy products where as our company OO had good stock in the initial stage of round-03 and had enough stocks on all products to sale.

The **good stocked up inventory for our company OO** had increased the chance to win the game.

vi. Daily Price change of Product:

Company OO daily price change:

SIM_ROUND	(All)
SALES_ORGANIZATION	OO
MATERIAL_LABEL	(Multiple Items)

The blank value indicate there is no stock available during those dates.

Average of NET_PRICE	Material Label					
Date	Butter	Cheese	Cream	Ice Cream	Milk	Yoghurt
01/05	68.06				28.02	31.23
01/06		93.32	82.29		28.02	31.23
01/07	68.06	93.32	82.29	51.32	28.02	31.23
01/08	68.06	93.32		51.32	28.02	31.23
01/09	68.06	93.32		51.32	28.02	31.23
01/10	68.06	93.32	81.01		28.02	
02/01		93.32			28.02	
02/02	68.06	93.32	81.01	51.32		
02/03	68.06	93.32			28.02	31.23
02/04	68.06	93.32		51.32	28.02	31.23
02/05	68.06	93.32	82.02		28.02	31.23
02/06	68.06	93.32		51.32		31.23
02/07	68.06	93.32		51.32	28.02	
02/08		93.32				
02/09	68.06	93.32		51.32	28.02	31.23
02/10	68.06	93.32	83.02			31.23
03/01	68.09	93.32	84.01	52.01	29.03	
03/02	68.09	93.32		52.01		31.99
03/03	68.78	94.01			30.02	31.99
03/04	68.78		84.9	52.05	30.02	31.99
03/05	68.78				30.02	31.99
03/06				50.01	30.02	
03/07	68.78	94.01			28.02	
03/08	68.78	94.01			28.02	31.29
03/09	68.78	94.01		50.01	29.01	32.02
03/10		93.06	81.29		29.01	32.02
Grand Total	68.24	93.40	82.67	51.26	28.46	31.39

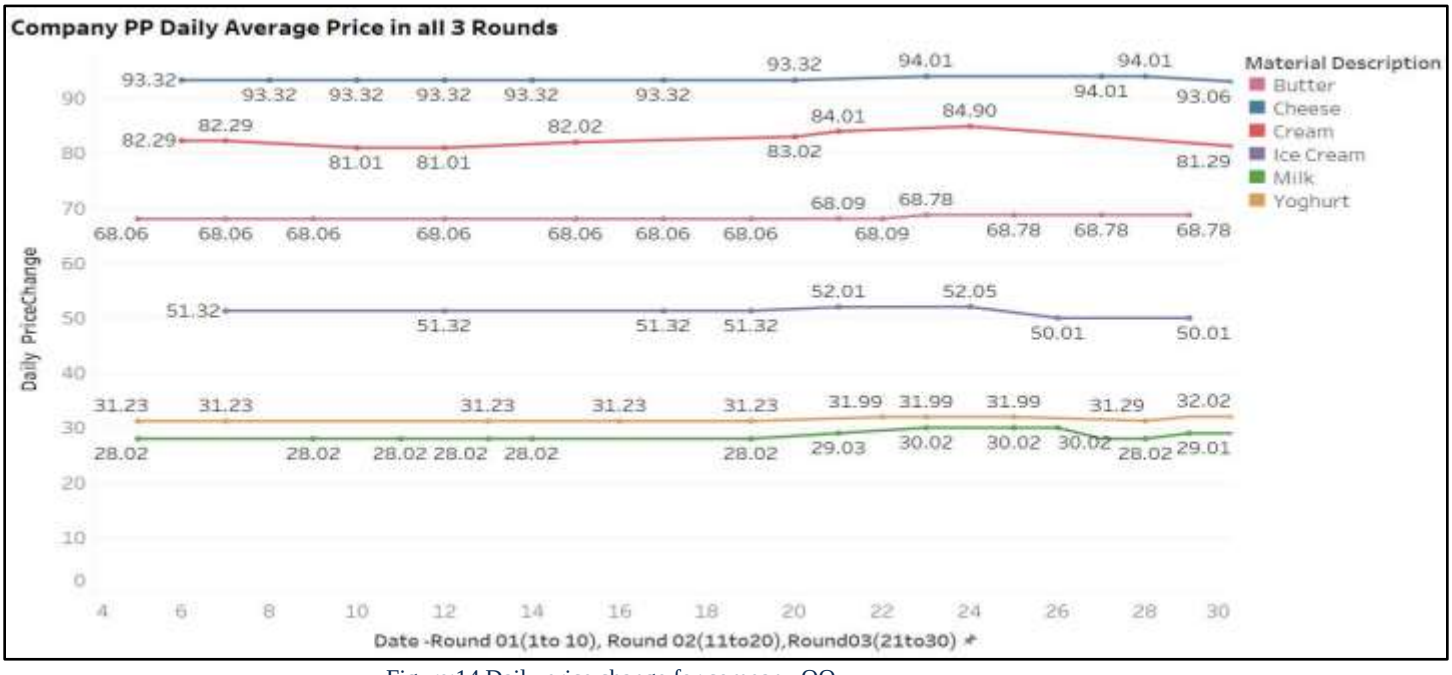

Figure:14 Daily price change for company OO

From the above figure: 14, we can understand that our **company OO had a good price range from the beginning** and the **daily price change was steady** and did not decrease the price rapidly. Even though the products sold by our company OO were few lesser when compared to other companies, this price range and profit percentage has helped us to win the game.

Company PP daily average price range:

SIM_ROUND	(All)
SALES_ORGANIZATI(	PP
MATERIAL_LABEL	(Multiple Items)

Average of NET_PRICE	Material Label					
Date	Butter	Cheese	Cream	Ice Cream	Milk	Yoghurt
01/05	63	87	76	46	24	27
01/06		87	76		24	27
01/07	60.00	83.00	73.00	44.00	23.00	26.00
01/08					24	
01/09	60	83	73	44	23	26
01/10	60.00					26.00
02/01	60	83	73	44		26
02/02	63.99	84.99				
02/03				46.99		29.99
02/04				46.99		
02/05	63.99	84.99	79.99	46.99	28.99	
02/06	62.99	86.49	76.25		26.75	
02/07		86.49	76.25		26.75	
02/08	62.99	86.49	76.25		26.75	
02/09		87	76	46	24	
03/05	70.49		79.99	51.99		34.49
03/06	66	87	77	44	32	32
03/07	66		77		32	32
03/08	62	84	74	45	28.99	26
03/09	70.49		79.99			
03/10	60	83	73		23	
Grand Total	62.56	84.87	75.49	45.83	25.49	27.11

The Blank Value represent the zero stocks on that date.

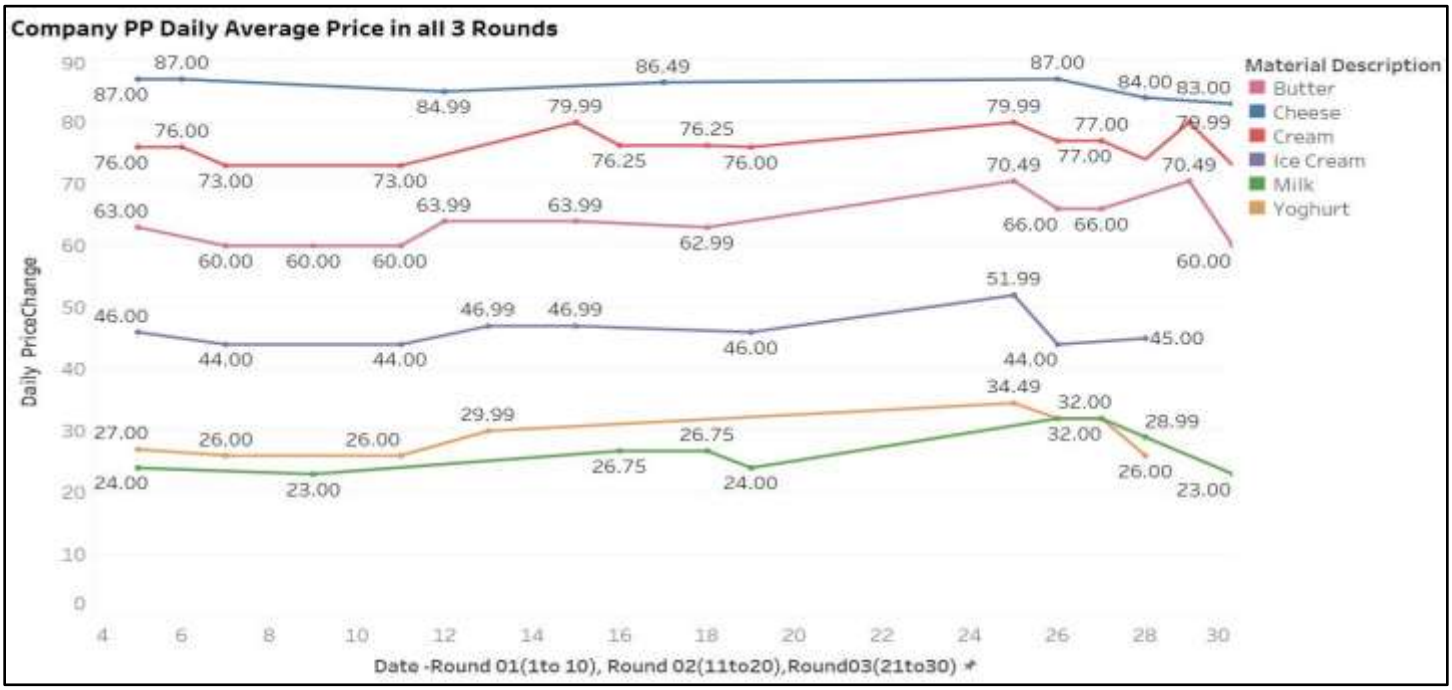

Figure: 15 Daily price change for company PP

After analyzing the company, we can understand that the company PP daily price range varies**,** and **their price was very low at the beginning of the game**. They started the game with **less profit,** and they decreased the price in the in the round-01 often, compared to the winning company OO and their price increased rapidly in round-03. But only in round-03, they had a good price point. They also had **zero inventory in most of the days for company PP when compared to our company OO**. Even though they had a good quantity of products sold, the price range is not as profitable compared to the winning company.

vii. Out of Stock Summary for all three regions:

We know the daily inventory stock status for both the companies, we summarized the total days out of stock for the products in each region for all three rounds.

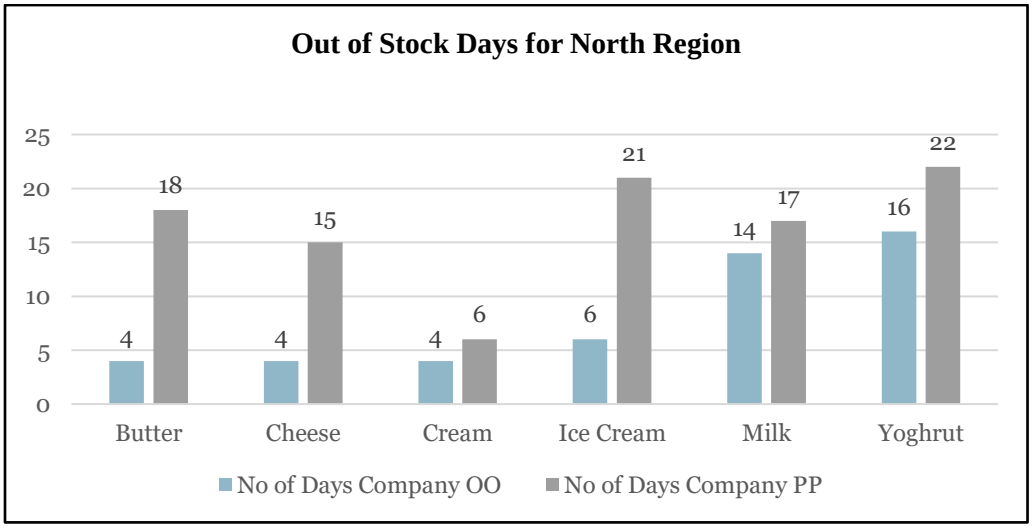

Figure:16.1 Summary out of stock inventory for North region (by Manimozhi Neethinayagam)

From the Figure 16.1, we can see that in North Location Ice cream and Yoghurt were out of stock for more days in all three rounds for company PP, whereas for Company OO Milk and Yoghurt were out of stock for a greater number of days in all three rounds in North Region. In **North Region over all Company OO had more number of stocks.**

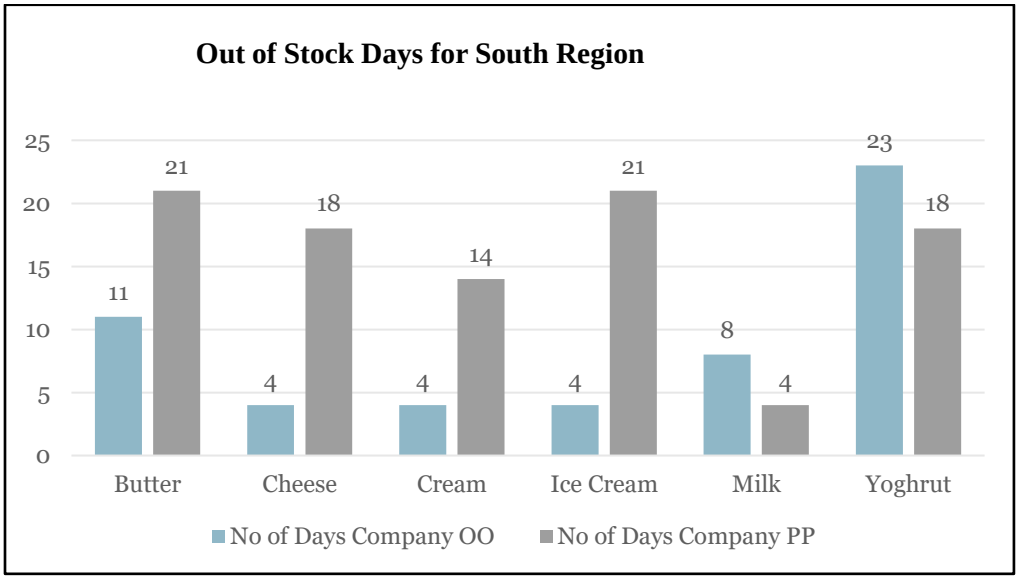

Figure:16.2 Summary out of stock inventory for south region

From the Figure 16.2, we can see that in South Location Ice cream, and Butter were out of stock for more days in all three rounds for company PP, whereas for Company OO Butter and Yoghurt were out of stock for a greater number of days in all three rounds in South Region. In **South Region over all Company OO had more number of stocks except yoghurt.**

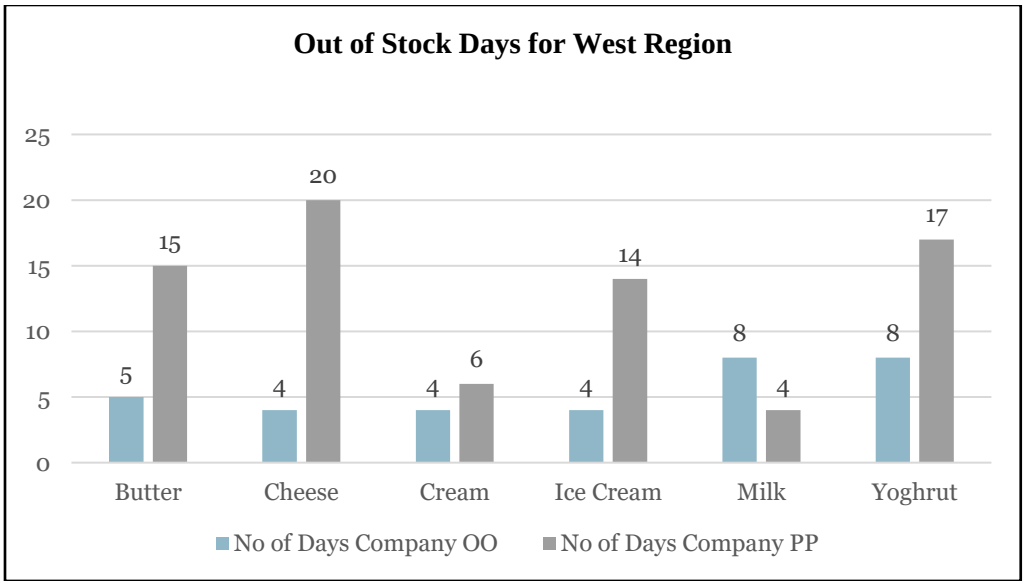

Figure:16.3 Summary out of stock inventory for West region

From the Figure 16.3, we can see that in West Location cheese and yoghurt were out of stock for more days in all three rounds for company PP, whereas for Company OO Milk and Yoghurt were out of stock for a greater number of days in all three rounds in South Region. In **West Region over all Company OO had more number of stocks.**

North	No of Days	
Out of stock inventory		
Material Description	Company OO	Company PP
Butter	4	18
Cheese	4	15
Cream	4	6
Ice Cream	6	21
Milk	14	17
Yoghrut	16	22
Total	48	99

South	No of Days	
Out of stock inventory		
Material Description	Company OO	Company PP
Butter	11	21
Cheese	4	18
Cream	4	14
Ice Cream	4	21
Milk	8	4
Yoghrut	23	18
Total	54	96

West	No of Days	
Out of stock inventory		
Material Description	Company OO	Company PP
Butter	5	15
Cheese	4	20
Cream	4	6
Ice Cream	4	14
Milk	8	4
Yoghrut	8	17
Total	33	76

Figure:16.4 Summary out of stock inventory for all 3 regions

From the Figure 16.4, we can understand that, even though the company PP had the highest sales compared to company OO, they ran out of stocks more days, compared to our company OO. The Company PP in all three Rounds and in all three regions, their Butter, yoghurt, Ice Cream and cheese were majorly out of stock whereas for Company OO except Milk, Butter and yoghurt they had a very stock inventory compared to other company PP. **Company OO had less zero inventory** compared to company PP and which **increased the chance of company OO to win** the game. Company PP had been out of stock on cheese, which is the highest dairy product in the inventory, they ran out of cheese majorly in all three regions, whereas our company OO had least cheese out of stock in all the regions and the price profit is also good.

viii. Changes made on six product quality in our independent planning

From the beginning, we focused on making high-quality products. We planned carefully how much to make and sell so that we could meet customer needs while also managing our inventory wisely. This smart approach, along with our six key improvements to product quality, helped us win the first round. By balancing product quality with sales and inventory management, we found a winning combination that pleased customers and kept costs down.

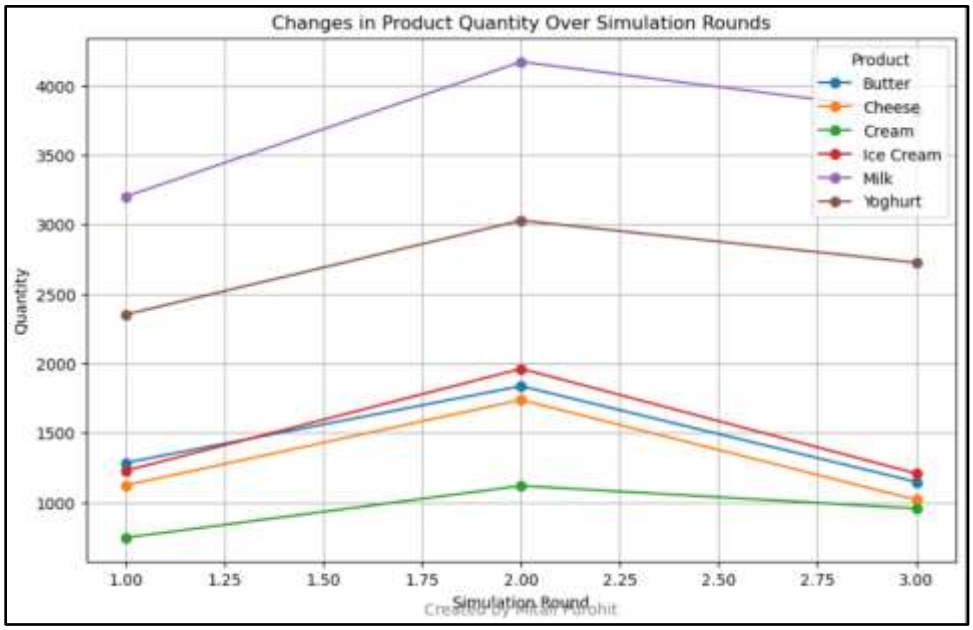

Figure: 17 Changes made on six product quality in our independent planning

The figure captures transformative quality changes in six products through our independent planning, showcasing successful efforts to exceed customer expectations.

ix. The changes in our sales margin for each dairy of 6 products

As Sales Manager, I am pleased to report that our team has successfully implemented a strategic pricing approach that has resulted in a significant increase in our sales margins for each dairy of 6 products. By gradually increasing prices by 10-11% in the first round and maintaining stable prices thereafter, we have been able to maximize profits while maintaining a competitive edge and customer satisfaction.

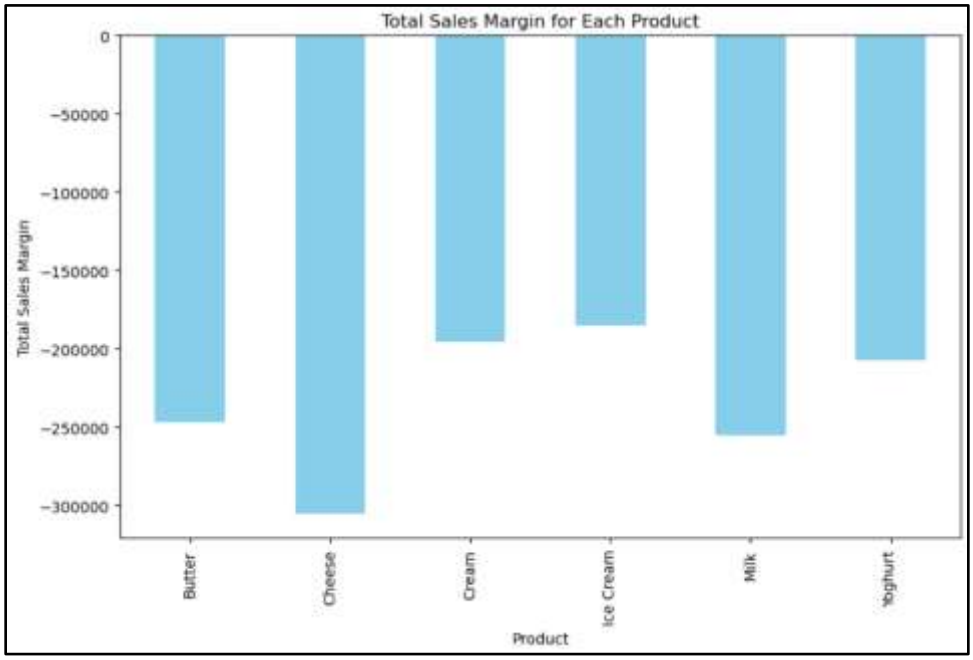

Figure: 18 The changes in our sales margin for each dairy of 6 products

This figure illustrates the remarkable changes in sales margins for each of our six dairy products as a result of the implemented strategy.

The strategic pricing approach was implemented in a phased manner:

- **Phase 1:** Gradual price increase of 10-11% across all six dairy products.
- **Phase 2:** Maintenance of stable prices to assess customer response and market trends.

Throughout the implementation process, we closely monitored sales data, customer feedback, and market trends to evaluate the effectiveness of the pricing strategy.
The success of the strategic pricing approach can be attributed to several factors:

- **Gradual price increase:** The gradual price increase minimized customer resistance and allowed us to maximize profits while maintaining customer satisfaction.
- **Competitive edge:** By maintaining stable prices after the initial increase, we were able to retain our competitive edge in the market.