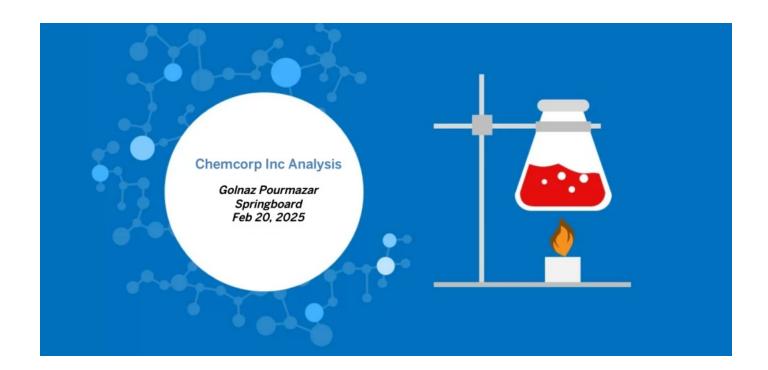
Cover Sheet Introduction Customers Profitability Revenue, Profit, Market size by Indust.. Dive into Biotech, M&I Dive into Medical Equ..





Cover Sheet	Introduction	Customers	Profitability	Revenue, Profit, Market size by Indust	Dive into Biotech, M&I	Dive into Medical Equ

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Context:

ChemCorp, a top chemical producer, is losing customers to tech-savvy competitors, causing a 10% revenue drop. To stay strong, it should focus on growing industries, improve its product lineup, and better understand its customers.

Objective:

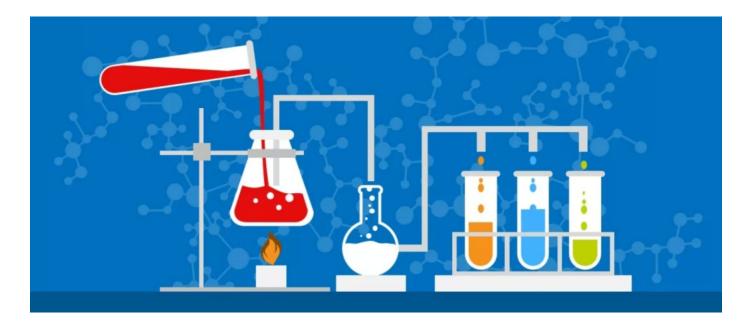
Reducing losses and increasing profit by focusing on:

Identifying high-growth industries and market opportunities.

Recommending which products to divest based on profitability and market demand.

Data Sources:

Sales Data (trasactional data and market data from the year of 2015)



Cover Sheet	Introduction	Customers	Profitability	Revenue, Profit, Market size by Indust	Dive into Biotech, M&I	Dive into Medical Equ

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Customers Distribution Across Segments

 $More than 50\% of customers buy chemicals: D, E, B, C, F and G. \\ Chemicals A and K are less popular, however, 73\% paper \& packaging customers buy chemical K.$

Unique Customer

	Paper and Packaging	Machinery and Industrial Goods	Biotechnology	Pharmaceuticals	Aerospace Defense	Medical Equipment	Grand Total
Chemical D	41	78	97	91	81	66	454
	41.84%	79.59%	100.00%	96.81%	92.05%	95.65%	83.46%
Chemical E	36	75	96	89	82	62	440
	36.73%	76.53%	98.97%	94.68%	93.18%	89.86%	80.88%
Chemical B	31	76	94	92	81	64	438
	31.63%	77.55%	96.91%	97.87%	92.05%	92.75%	80.51%
Chemical C	31	75	81	71	71	60	389
	31.63%	76.53%	83.51%	75.53%	80.68%	86.96%	71.51%
Chemical F	41	68	37	61	60	56	323
	41.84%	69.39%	38.14%	64.89%	68.18%	81.16%	59.38%
Chemical G	21	53	78	65	57	39	313
	21.43%	54.08%	80.41%	69.15%	64.77%	56.52%	57.54%
Chemical I	89	28	18	12	26	17	190
	90.82%	28.57%	18.56%	12.77%	29.55%	24.64%	34.93%
Chemical J	15	35	21	24	18	27	140
	15.31%	35.71%	21.65%	25.53%	20.45%	39.13%	25.74%
Chemical H	87	13	3	7	14	6	130
	88.78%	13.27%	3.09%	7.45%	15.91%	8.70%	23.90%
Chemical A	30	13	8	12	10	12	85
	30.61%	13.27%	8.25%	12.77%	11.36%	17.39%	15.63%
Chemical K	72 73.47%	1 1.02%	1 1.03%	1 1.06%	1 1.14%		76 13.97%
Grand Total	98	98	97	94	88	69	544
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%



Cover Sheet	Introduction	Customers	Profitability	Revenue, Profit, Market size by Indust	Dive into Biotech, M&I	Dive into Medical Equipment

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Which Industry and Products drive profit?

Top 3 chemicals are E, C, and G with the heighest profit. Biotech with 64.37% and Machinery &Industrial Goods with 63.49% profit are the most profitable industry.

Profit Margin by Industry and Product

	Machinery and Industrial Goods	Biotechnology	Medical Equipment	Pharmaceuticals	Aerospace Defense	Paper and Packaging	Grand Total
Chemical E	88.69%	88.11%	87.36%	87.35%	85.38%	84.00%	87.45%
Chemical C	69.19%	66.18%	64.95%	62.81%	54.48%	60.68%	63.17%
Chemical G	61.36%	63.61%	62.37%	60.70%	61.56%	63.26%	62.25%
Chemical J	63.89%	58.97%	61.84%	59.95%	57.14%	58.27%	59.96%
Chemical K	86.80%	71.47%		55.52%	75.61%	59.05%	59.11%
Chemical H	70.08%	78.48%	46.45%	73.72%	72.31%	55.39%	55.73%
Chemical F	61.01%	56.56%	43.79%	56.64%	56.82%	52.63%	53.94%
Chemical D	52.91%	51.93%	50.09%	47.57%	38.58%	35.67%	48.44%
Chemical I	51.67%	65.37%	53.45%	58.43%	43.70%	44.19%	44.91%
Chemical B	50.56%	43.39%	41.44%	41.55%	33.23%	21.86%	41.73%
Chemical A	2.53%	-4.31%	-21.97%	6.57%	12.76%	2.34%	1.60%
Grand Total	63.49%	64.37%	55.42%	58.04%	53.92%	50.49%	57.40%



Introduction Customers Profitability Revenue, Profit, Market size by Indust.. Dive into Biotech, M&I Dive into Medical Equipment Profit Transactions

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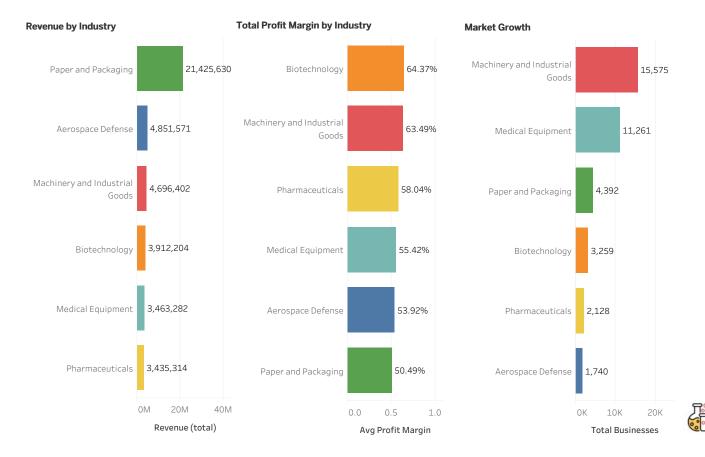
Compare Revenue, Profit and Market Size by Industry

Paper & packaging has the highest Revenue at \$21.5M, while having the lowest Profit Margin.

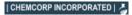
Biotech and Machinery and Industrial Goods has the highest Avrage Profit Margin.

Considering both market size and avrage profit marging, Machinery and Industrial Goods is the most attractive industry.



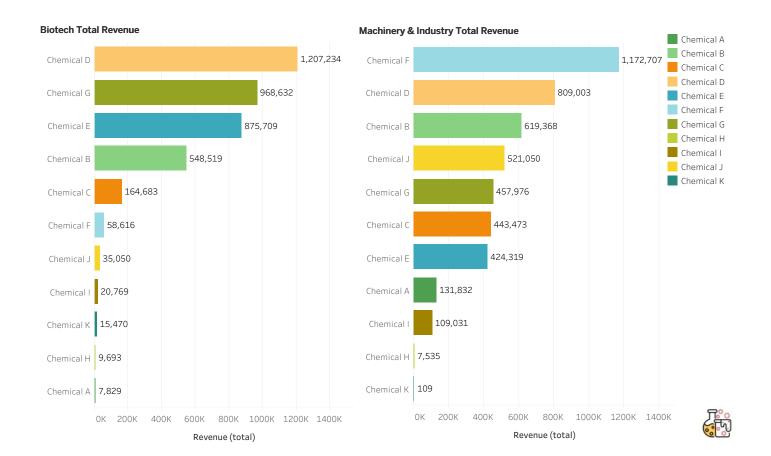


Customers	Profitability	Revenue, Profit, Market size by Indust	Dive into Biotech, M&I	Dive into Medical Equipment	Impact of Nagative Profit Transactions	Product Revenue Seassonslity



Dive into Biotech and Machinery & Industry

Chemical D, G, E, B and F are important for Biotech and M&I. So these Shoude be continued and promote.



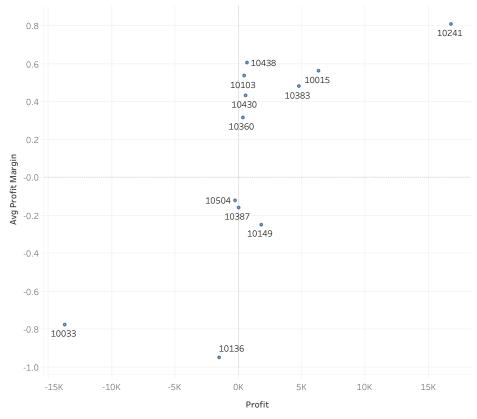
Profitability Revenue, Profit, Dive into Biotech, M&I Dive into Medical Equipment Impact of Nagative Product Revenue Profitability by Seassonslity Geography

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Dive into Medical Equipment Indusry and Chemical A

Focusing on Chemical A and the Medical Equipment Industry, the profit generated by customers is close to zero, and the rare outliers cancel each other out.

Chemical A and Medical Equipment Industry Customer Divestment





Revenue, Profit, Market size by I.. Dive into Biotech, M&I

Dive into Medical Equipment Impact of Nagative Profit Transactions Product Revenue Seassonslity Profitability by Geography Insights



Impact of negative profit transactions

We can see that some customers have negative profit margins but we do not know their effect size.

By removing negative transactions from our analysis, we observe a significant change for Chemical A, while other chemicals remian uneffected. This indicates that chemical A is the only product with large negtaive profit transactions.

Avg. Profit Margin

	Aerospace Defense	Biotechnology	Machinery and Indus	Medical Equipment	Paper and Packaging	Pharmaceuticals
Chemical E	85.38%	88.11%	88.69%	87.36%	84.00%	87.35%
	85.38%	88.11%	88.69%	87.36%	84.00%	87.35%
Chemical C	57.38%	66.18%	69.19%	65.79%	61.26%	63.55%
	54.48%	66.18%	69.19%	64.95%	60.68%	62.81%
Chemical G	61.56%	63.61%	61.36%	62.37%	63.26%	60.70%
	61.56%	63.61%	61.36%	62.37%	63.26%	60.70%
Chemical J	57.14%	58.97%	63.89%	61.84%	58.27%	59.95%
	57.14%	58.97%	63.89%	61.84%	58.27%	59.95%
Chemical K	75.61% 75.61%	71.47% 71.47%	86.80% 86.80%		59.33% 59.05%	55.52% 55.52%
Chemical F	57.86%	56.56%	61.01%	57.44%	56.04%	57.00%
	56.82%	56.56%	61.01%	43.79%	52.63%	56.64%
Chemical H	72.31%	78.48%	70.08%	46.45%	55.58%	73.72%
	72.31%	78.48%	70.08%	46.45%	55.39%	73.72%
Chemical I	50.37%	65.37%	53.15%	56.24%	53.27%	58.43%
	43.70%	65.37%	51.67%	53.45%	44.19%	58.43%
Chemical D	48.49%	52.78%	53.03%	53.39%	43.88%	50.57%
	38.58%	51.93%	52.91%	50.09%	35.67%	47.57%
Chemical B	43.64%	46.40%	50.81%	47.68%	40.60%	45.12%
	33.23%	43.39%	50.56%	41.44%	21.86%	41.55%
Chemical A	35.48%	56.61%	60.61%	54.19%	37.46%	37.20%
	12.76%	-4.31%	2.53%	-21.97%	2.34%	6.57%



Dive into Biotech, M&I Dive into Medical Equipment Impact of Nagative Profit Transactions Product Revenue Seassonslity Profitability by Geography Insights

Recommendations

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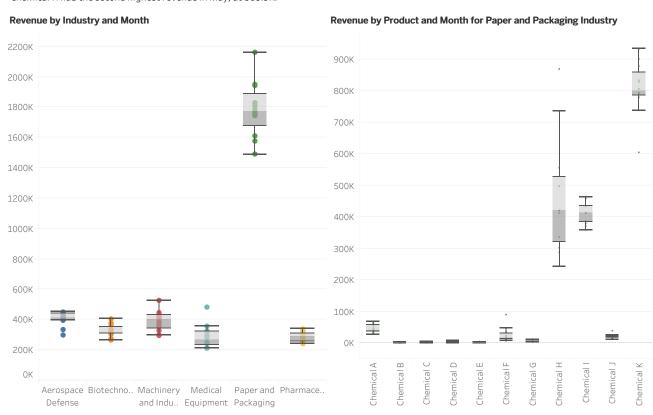
Industry and Product Revenue Seassonality

At the industry level, the paper and packaging indystry is the most volatile market, showing a significant change from April to May.

Focusing only on the Paper and Packaging industry, we see that among the products, Chemicals K and H exhibited the most volatile revenue behavior in 2015:

Chemical K had the highest revenue in June, reaching 932.6K. Chemical H had the second highest revenue in May, at 868.9K.

Business Type Aerospace Defense Biotechnology Machinery and Ind.. Medical Equipment Paper and Packagi.. Pharmaceuticals





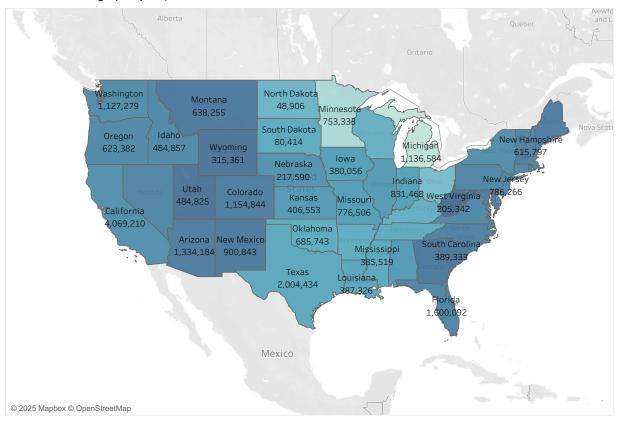
Dive into	Dive into Medical	Impact of Nagative	Product Revenue	Profitability by	Insights	Recommendations
Biotech, M&I	Equipment	Profit Transactions	Seassonslity	Geography		

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Profitability by Geography

Top 5 states with highest Revenue are: California, New York, Texas, Florida, Ohio. East Cost and Mountion Region has the most Profit Margin.

Customer Profit Margin (Geospatial)





Dive into Dive into Medical Impact of Nagative Product Revenue Profitability by Biotech, M&I Equipment Profit Transactions Seasonslity Geography Recommendations

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Insights:

Chemical A and K are less popular, however, 73% of Paper and Packaging customers buy Chemical K.

Highest profitable chemicals are E, C, and G while in the industry level Biotech and Machinery & Industrial Goods are the top ones.

Machinery & Industrial Goods is the most attractive industry considering both market size and average profit margin.

Chemical A has the lowest profit margin across all the segments except Machinery and Industrial Goods.

Paper and Packaging segment has the lowest profit marging among all segments but drives the highest revenue. At the industry level, it is also the most volatile market, showing a significant change from April to May. Whitin this industry, Chemicals K and H exhibited the most volatile revenue behavior...



Dive into Dive into Medical Impact of Nagative Product Revenue Profitability by Insights Recommendations

Biotech, M&I Equipment Profit Transactions Seassonslity Geography



Recommendations:

Divesting from chemical A altogether would be beneficial towards our overall profit margin.

Promote Chemicals D, E, B, C and G. these are most profitable and popular, also important for M&I and Biotech.

To increase profit and keep customers, focus on M&I and Biotech industries; specially in East Coast and Rocky Mountions regions.

