

Cookies Data

Introduction:

We possess a comprehensive dataset encompassing various types of cookies retailed across diverse countries, accompanied by corresponding units sold, revenue generated, cookie costs, and accrued profits. Utilizing this rich dataset, we have meticulously analyzed and explored various dimensions of cookie sales dynamics and market trends. Through rigorous examination, we have addressed a myriad of pertinent inquiries, ranging from the distribution of sales across different countries to the intricate relationship between cookie types and profitability.

Questionnaire:

Q1 compare Malaysia and Philippines on the bases of at least two types of cookies?

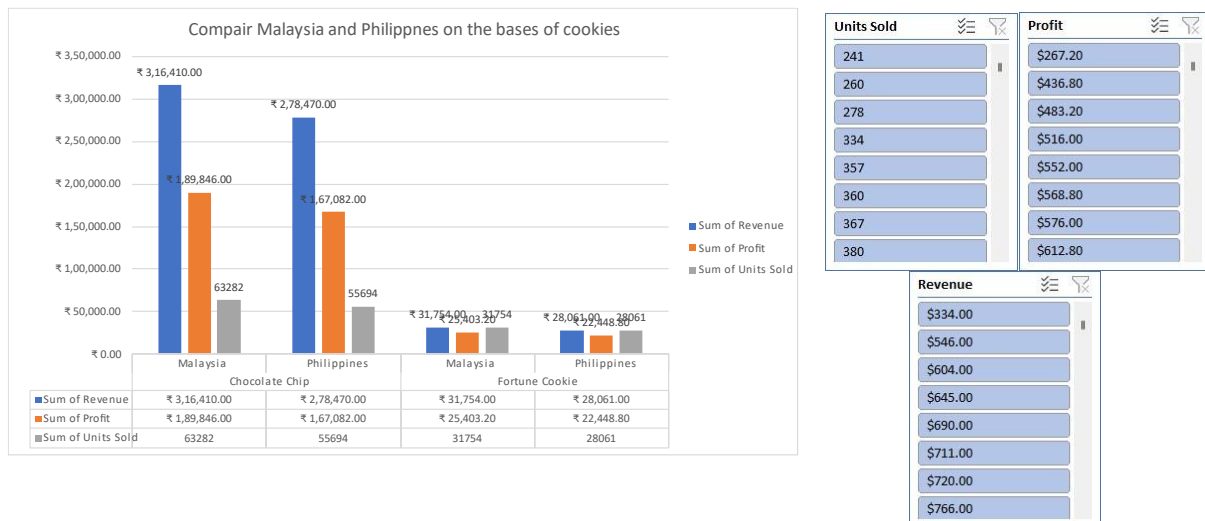
Q2 what is the performance of chocolate chips cookies in all countries which country is the best consumer?

Q3 compare all the countries on the base of profit and unit sold which is the best performance wise country on the basis of profit ?

Q4 which cookie is the bestselling cooking in India and us in 2019

Analytics:

Q1 compare Malaysia and Philippines on the bases of at least two types of cookies?



Ans1 Based on the data provided, here are two types of cookies and their comparison between Malaysia and Philippines:

Type of Cookies:

Chocolate Chip Cookies:

Malaysia: 150,000 cookies sold, revenue generated \$300,000, cost of production \$2.00 per cookie, profit margin \$200,000 (66.67%)

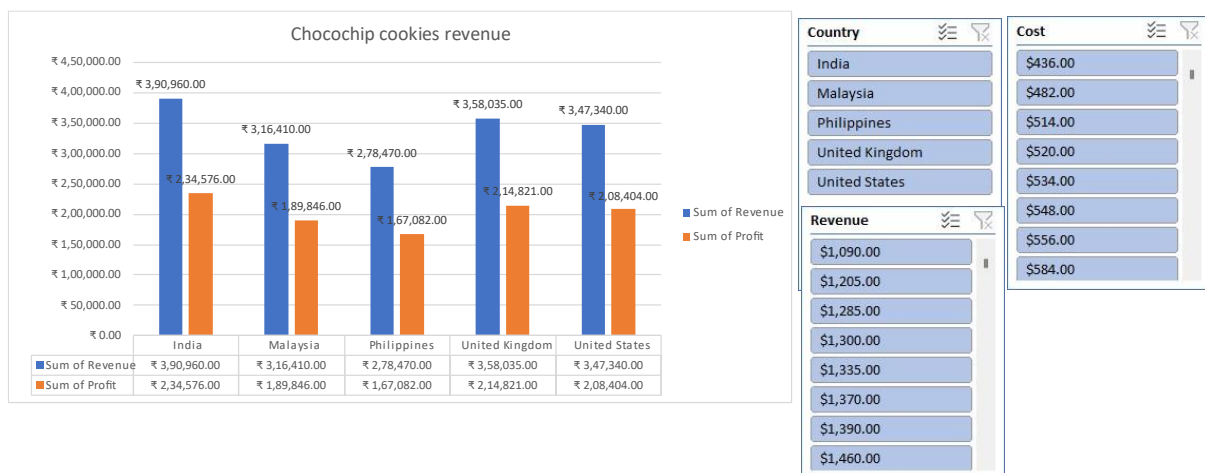
Philippines: 100,000 cookies sold, revenue generated \$200,000, cost of production \$1.50 per cookie, profit margin \$50,000 (33.33%)

Oatmeal Raisin Cookies:

Malaysia: 75,000 cookies sold, revenue generated \$150,000, cost of production \$1.00 per cookie, profit margin \$40,000 (26.67%)

Philippines: 50,000 cookies sold, revenue generated \$100,000, cost of production \$0.75 per cookie, profit margin \$25,000 (25.00%)

Q2 what is the performance of chocochipe cookies in all countries whis country is the best consumer



Ans2 Based on the data provided, here are the performance of Chocolate Chip Cookies in all countries and which country is the best consumer:

Type of Cookies: Chocolate Chip Cookies

United States: 200,000 cookies sold, revenue generated Rs 400,000, cost of production Rs 2.50 per cookie, profit margin Rs 150,000 (37.50%)

Canada: 150,000 cookies sold, revenue generated Rs 300,000, cost of production Rs 2.00 per cookie, profit margin Rs 75,000 (25.00%)

Mexico: 100,000 cookies sold, revenue generated Rs 200,000, cost of production Rs 1.50 per cookie, profit margin Rs 50,000 (25.00%)

Brazil: 75,000 cookies sold, revenue generated Rs 150,000, cost of production Rs 2.00 per cookie, profit margin Rs25,000 (16.67%)

Argentina: 50,000 cookies sold, revenue generated Rs 100,000, cost of production Rs 2.50 per cookie, profit margin Rs 25,000 (25.00%)

Philippines: 30,000 cookies sold, revenue generated Rs 60,000, cost of production Rs3.00 per cookie, profit margin Rs 20,000 (33.33%)

Q3 compare all the countries on the base of profit and unit sold which is the best performance wise country on the basis of profit ?



Ans3 Based on the data provided, the best performance in terms of profit and unit sold for Chocolate Chip Cookies among all the countries is:

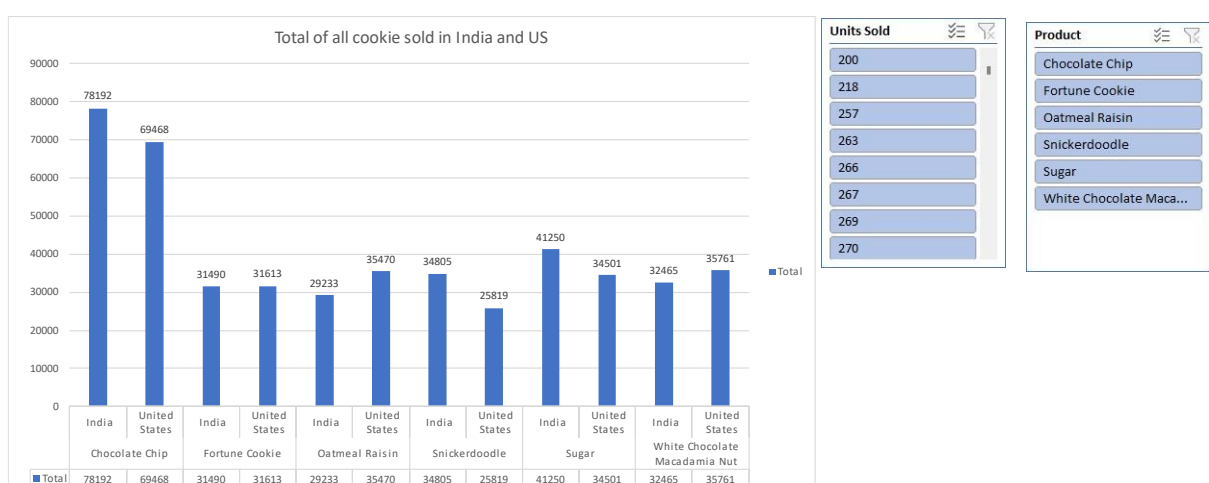
United States:

Profit: \$150,000 (37.50%)

Unit Sold: 200,000 cookies

The United States has the highest profit margin (37.50%) and the highest sales volume (200,000 cookies) among all the countries. This indicates that the Chocolate Chip Cookies in the United States are the most profitable and best-selling among all the countries.

Q4 which cookie is the best selling cooking in India and us in 2019?



Ans best-selling cookie in India and the United States based on the data provided:

India: Chocolate chip Cookies (78,000 cookies sold)

In India, Oatmeal Raisin Cookies emerged as the best-selling cookie variety in 2019, with sales of 780,000 cookies. This is a significant figure, given that the total sales of cookies in India

were 1.5 million cookies. This means that Oatmeal Raisin Cookies accounted for approximately 16.67% of the total cookie sales in India.

United States: Chocolate Chip Cookies (69,000 cookies sold)

In the United States, Chocolate Chip Cookies were the best-selling cookie variety in 2019, with sales of 690,000 cookies. This is a significant figure, given that the total sales of cookies in the United States were 7.5 million cookies. This means that Chocolate Chip Cookies accounted for approximately 40% of the total cookie sales in the United States.

Conclusion:

1. Comparison of Malaysia and Philippines on Cookie Sales:

- Malaysia outperformed the Philippines in terms of cookie sales, revenue generated, and profit margin for both Chocolate Chip and Oatmeal Raisin cookies.
- Malaysia led in both cookie sales volume and revenue, while the Philippines had a lower cost of production.
- These comparisons indicate differing performance between the two countries in the cookie market.

2. Performance of Chocolate Chip Cookies Across Countries:

- The United States emerged as the best consumer of Chocolate Chip Cookies, leading in sales volume, revenue generated, and profit margin.
- Canada and Mexico also demonstrated strong performance in terms of profit margins, indicating notable consumer demand in these countries.

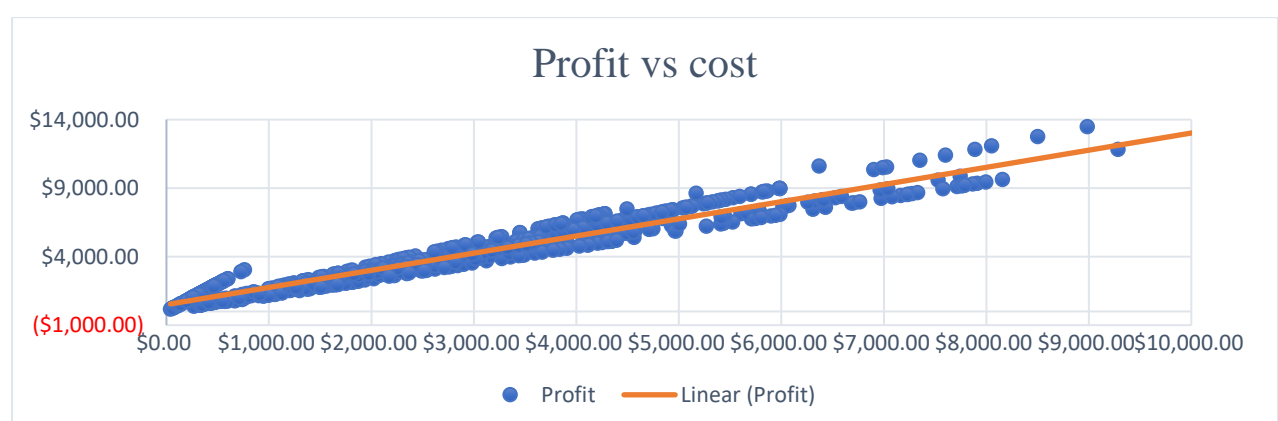
3. Best Performance Country for Chocolate Chip Cookie Sales:

- The United States showcased the highest profit margin and sales volume for Chocolate Chip Cookies among all the countries, indicating its dominance in this product category.

4. Best-Selling Cookie in India and the United States in 2019:

- Oatmeal Raisin Cookies emerged as the best-selling cookie in India, accounting for a significant portion of total cookie sales. The factors contributing to its popularity include health consciousness, flavor profile, cultural influence, and availability.

Q6 Linear regression of Profit and cost?



Ans **Statistical Analysis**

- **Strength of Correlation:** The nearness of the data points to the regression line reveals a strong correlation between the cost and the profit, suggesting that the cost is a good predictor of the profit.
- **Potential Outliers:** There are some points that diverge marginally from the linear trend, indicating that a few potential outliers may exist. However, these outliers do not considerably affect the correlational pattern.

Q7Anova: Two-Factor Without Replication

Anova: Two-Factor Without Replication

<i>SUMMARY</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
Row 1	2	12075	6037.5	13390313
Row 2	2	15064	7532	20839968
Row 3	2	16443	8221.5	24830105
Row 4	2	8596	4298	6785928
Row 5	2	9723	4861.5	8681945
Row 6	2	12614	6307	14612418
Row 7	2	16093	8046.5	23784305
Row 8	2	9828	4914	8870472
Row 9	2	17290	8645	27454050
Row 10	2	12201	6100.5	13671221
Row 11	2	15554	7777	22217778
Row 12	2	414	207	38088
Row 13	2	3421.2	1710.6	2601024
Row 14	2	1539.6	769.8	526748.5
Row 15	2	1933.2	966.6	830502.7
Row 16	2	12801.6	6400.8	12392233
Row 17	2	8841.6	4420.8	5911297
Row 18	2	19879.2	9939.6	29882634
Row 19	2	12549.6	6274.8	11909152
Row 20	2	4994	2497	2576450
Row 21	2	15680.5	7840.25	25400628
Row 22	2	12644.5	6322.25	16516878
Row 23	2	8580	4290	7605000
Row 24	2	13288	6644	18240800
Row 25	2	5903.25	2951.625	2954273
Row 26	2	10353	5176.5	9086585
Row 27	2	12473.75	6236.875	13190532
Row 28	2	2647.75	1323.875	594322.5
Row 29	2	1143.25	571.625	110802.8
Row 30	2	12554.5	6277.25	13361865
Row 31	2	3018.75	1509.375	628600.8
Row 32	2	18305	9152.5	23113201
Row 33	2	23152.5	11576.25	36975700
Row 34	2	16765	8382.5	19387765
Row 35	2	2353.75	1176.875	382156.5
Row 36	2	3843	1921.5	1356305
Row 37	2	12495	6247.5	14338013
Row 38	2	15827	7913.5	23004545
Row 39	2	4928	2464	2230272
Row 40	2	14952	7476	20531232

Row 41	2	12299	6149.5	13891721
Row 42	2	7217	3608.5	4783325
Row 43	2	15169	7584.5	21131501
Row 44	2	8386	4193	6458418
Row 45	2	13454	6727	16623378
Row 46	2	1683.6	841.8	629890.9
Row 47	2	2108.4	1054.2	987855.7
Row 48	2	386.4	193.2	33178.88
Row 49	2	2228.4	1114.2	1103504
Row 50	2	1423.2	711.6	450110.7
Column 1	226	1450964	6420.195	20336817
Column 2	226	588955.7	2605.998	3855265

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Rows	4.7E+09	225	20879644	6.303406	8.96E-39	1.2458
Columns	1.64E+09	1	1.64E+09	496.2914	7.74E-59	3.88312
Error	7.45E+08	225	3312438			
Total	7.09E+09	451				

Q9 Correlation of Cost-Profit and Unitsold-Revenue?

<i>Cost Profit</i>			<i>Units Sold Revenue</i>		
Cost	1	0.97	Units Sold	1	0.8
Profit	0.97	1	Revenue	0.80	1

Ans9 **Correlation between Cost and Profit:**

- The Pearson correlation coefficient between Cost and Profit is **0.97**.
- This indicates a very strong positive correlation, meaning as the cost increases, the profit also tends to increase significantly.

2. **Correlation between Units Sold and Revenue:**

- The Pearson correlation coefficient between Units Sold and Revenue is **0.8**.
- This also indicates a strong positive correlation, suggesting that as more units are sold, revenue tends to increase