Discounts in SaaS Companies: Counter-Productive?

By: Matthew Adi Simanjaya

Context Points

Main questions answered in this project:
- Is offering discounts to clients working to increase number of transactions and quantity purchased?
- At what discount level do discounts start eating into the profits?
- Where are we applying the most discounts? And how is that affecting profits and number of sales?

The dataset has info on transactions for a SaaS Company.

The intent of this project is:

- To see if the application of discounts by this company has been effective.
- Suggest tactics to better use discounts for future transactions.

Note:

- The dataframe analyzed goes from 4 Jan 2020 to 31 Dec 2023.
- The Data Cleaning Phase will not be discussed here (it is visible in the Google Colab link at the end of this document).
- We focus only on the effect of discounts on profits, quantity purchased and transaction count here.
- We will assume that 'Sales' refers to gross income, before discount is applied.
- We only group the data by country and companies, as there are enough unique values in those categories to ensure the correlations aren't affected badly by outliers.
- When assessing countries, Slovenia will be ignored from the results: there is only one transaction in that country that was unusually profitable.
- The Profit/Loss and Sales Columns have no Currency sign. To avoid misrepresenting this dataset, I have not added any myself.

Agenda

- **Historical Precedence of the Effectiveness of Discounts on SaaS Products**
- Effect of Discounts on SaaS Products for this Company
  - Is offering discounts to clients working to increase number of transactions and quantity purchased?
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- Next Steps for this Company

Overdoing Discounts hurts Retention Rates, Willingness to Pay and Relative Lifetime Value (LTV).

Discount Level	Willingness to Pay Relative to Price	Mean 3 Month Churn Rate	Mean Relative LTV
Minimal	+5.73%	3.44%	–
Aggressive	-19.78%	10.82%	-32.41%

Source: https://www.paddle.com/blog/saas-discounting-strategy

Too many discounts can:

Worsen brand image

Attract a suboptimal customer base that:

- Aren't a good fit for company growth
- Aren't interested in long-term renewals
- Makes us lose out on profits from better clients coming from better pricing strategies

Reduce perceived LTV

Source:
https://www.sastrify.com/blog/saas-discount-strategies

It also lowers Monthly Recurring Revenue (MRR).

| Discount Level	Customer Acquisition Costs (CAC)	Monthly Recurring Revenue (MRR)	Time to Recover CAC with MRR
Minimal	$6,000	$500	12 Months
Aggressive	$6,000	$400	15 Months

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Increased Discounts Lowers Profits and Sales…

Relation between Discount vs Median Profit/Loss (For Customers)
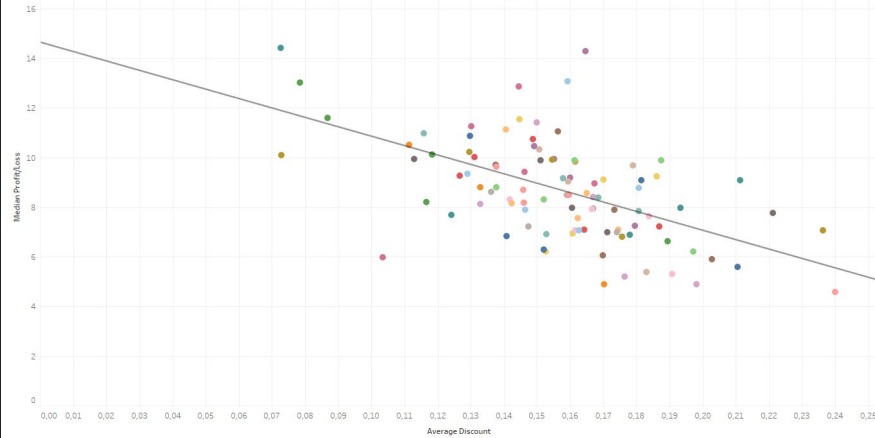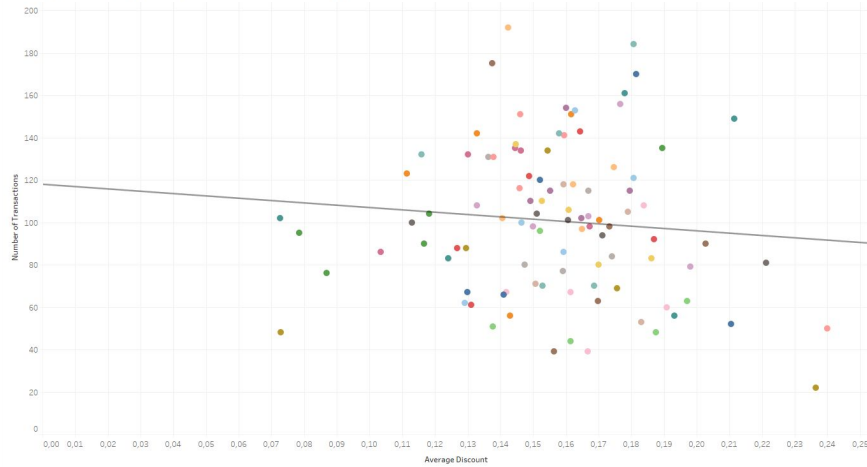
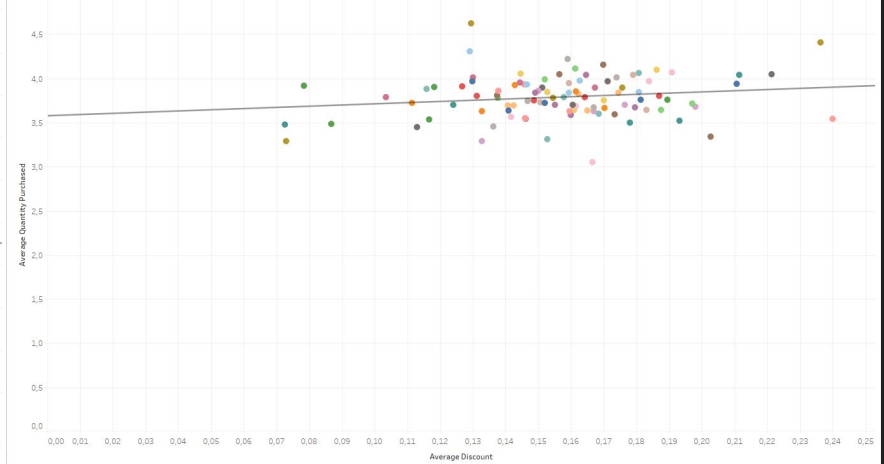Relation between Discount vs Median Sales (For Customers)
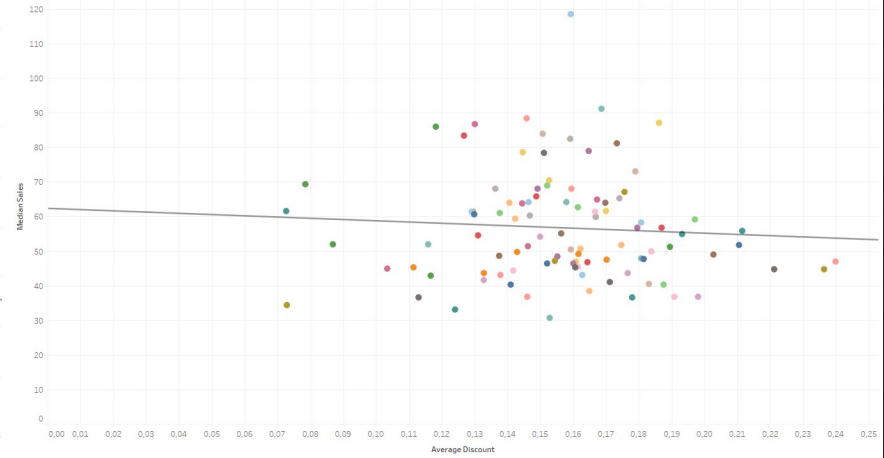
…But still leads to Less Transactions and Doesn't Raise Quantities by much.

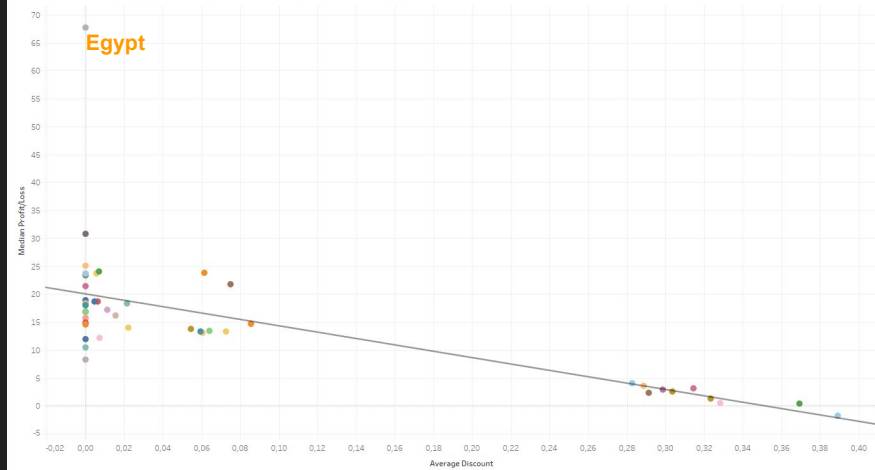Relation between Discount vs Transaction Count (For Customers)

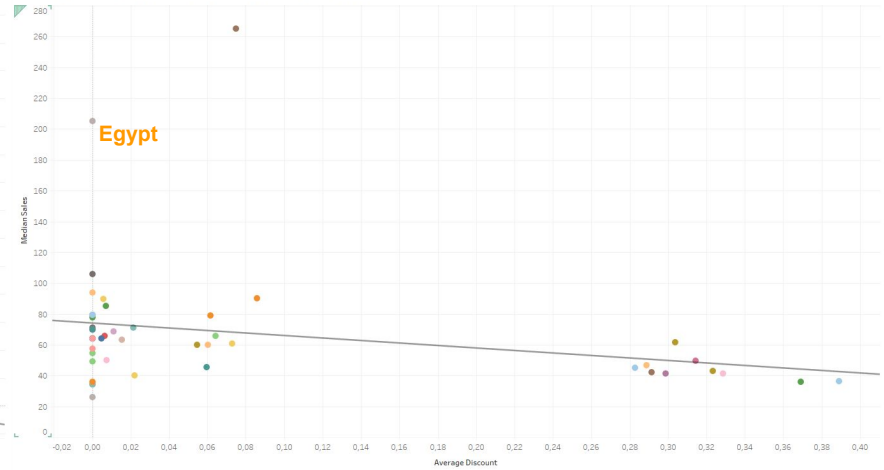Relation between Discount vs Average Quantities Purchased (For Customers)

The Same Relations can be seen if we group data points by Country…

Slovenia is excluded in these graphs: Only one transaction with unusually high profits.

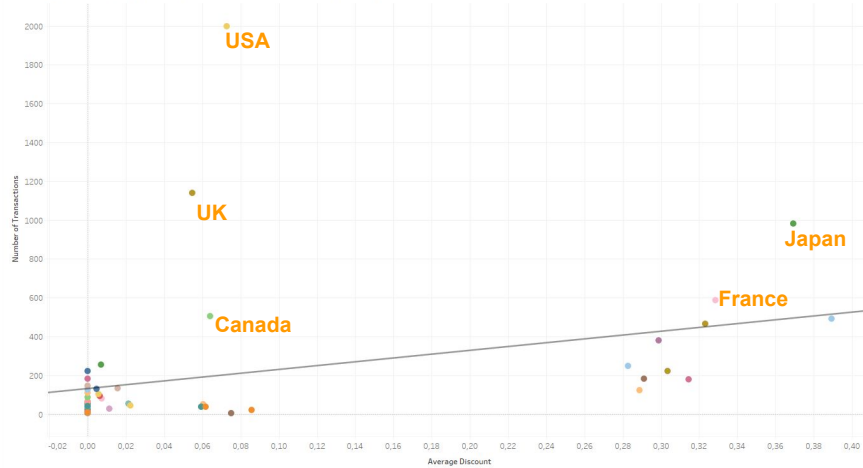Relation between Discount vs Median Profit/Loss (For Countries)

Egypt

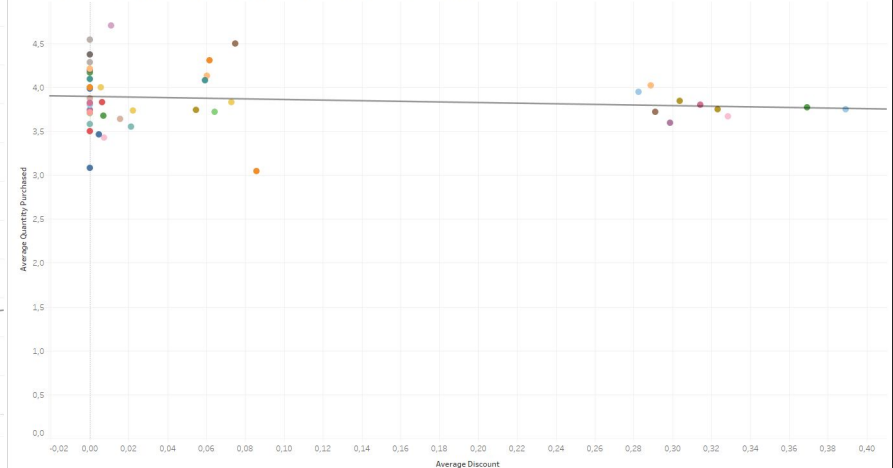Relation between Discount vs Median Sales (For Countries)

Egypt

…Except for Transaction Count, which Increases with Rising Discounts

Slovenia is excluded in these graphs: Only one transaction with unusually high profits.

Relation between Discount vs Transaction Count (For Countries)

Relation between Discount vs Average Quantities Purchased (For Countries)

Confounding Variable:

Many of the outliers above the trend line are global business hubs or have large, developed economies.

Our customers are quite large and multinational, so they are likely to have many offices and already conduct many of their operations there.

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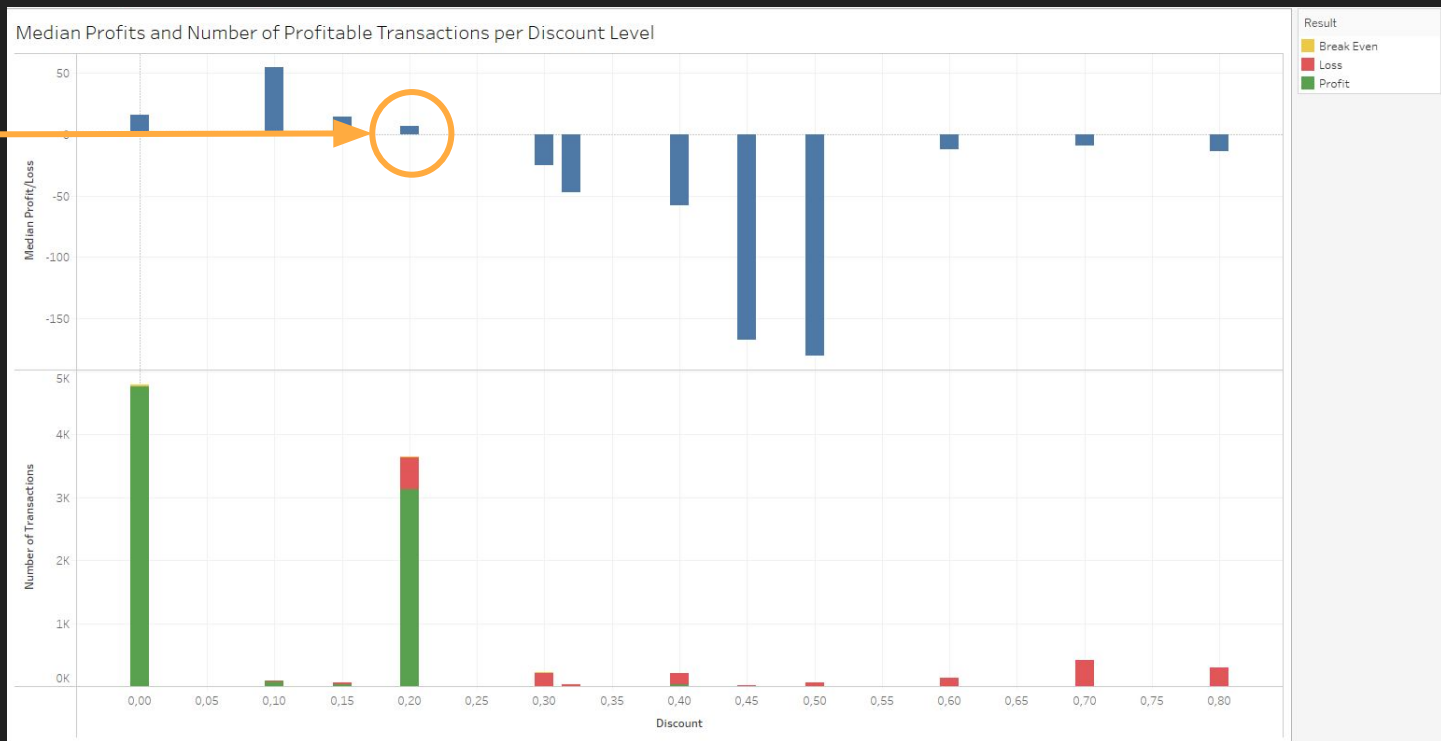
Discounts above 20% are Sure to Result in Losses

Even at 20% discounts, median profits are in single digits.

Median Profit: 6.5

This is in line with the typical discount range given by most SaaS companies (10-20%)

Source: https://www.capchase.com/blog/should-growing-saas-companies-offer-annual-discounts

Median Profits and Number of Profitable Transactions per Discount Level

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If Discounts are Present in Most Transactions, Profits get Lower.

Offering small discounts on less than half of transactions doesn't affect profits much.

Ratio of Transactions Given Discounts vs Median Profits for Countries

The Lower the Discounts, The Higher the Profits.

At <10% discounts, profits seem to stabilize, barely rising as discounts go lower.

The Same Trend is Weaker but Visible if we look at Companies

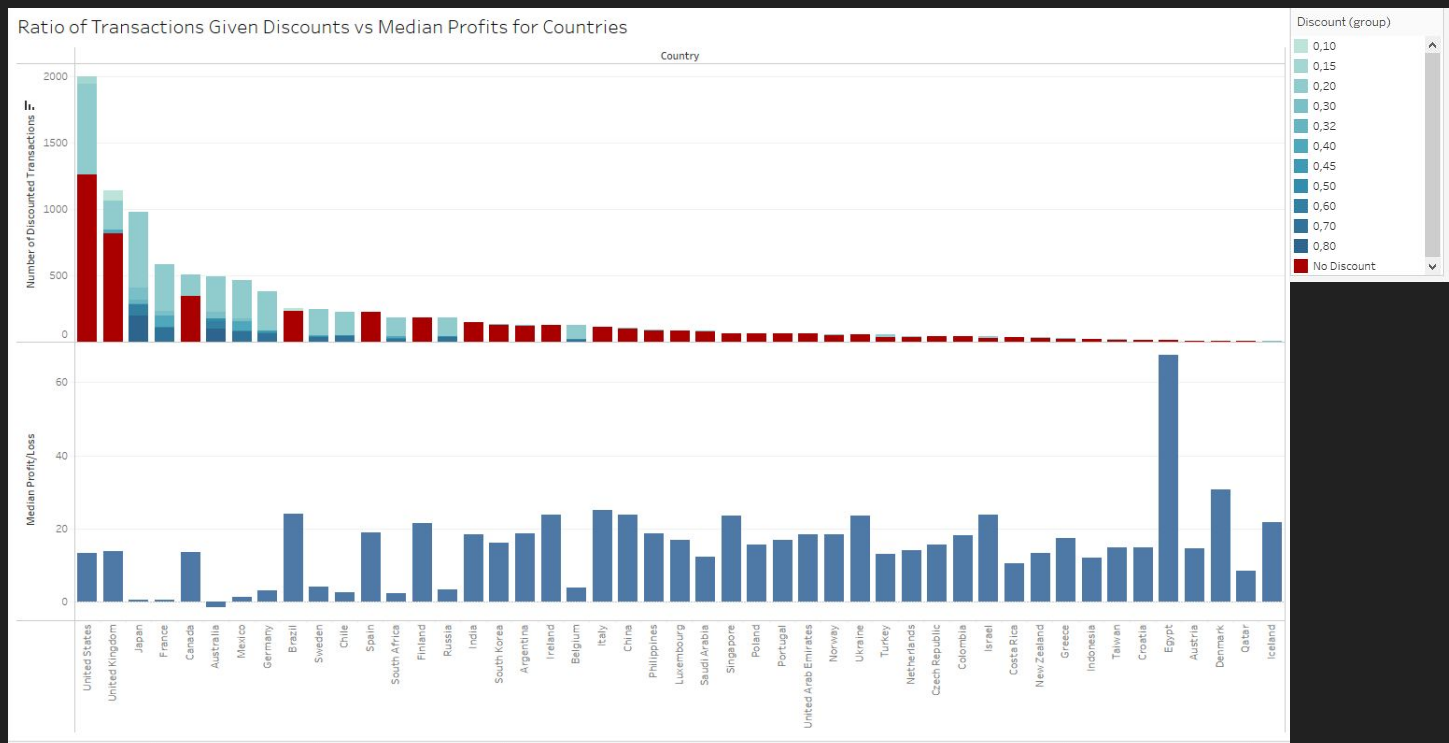Likely because most of their average discounts don't go above 20%.
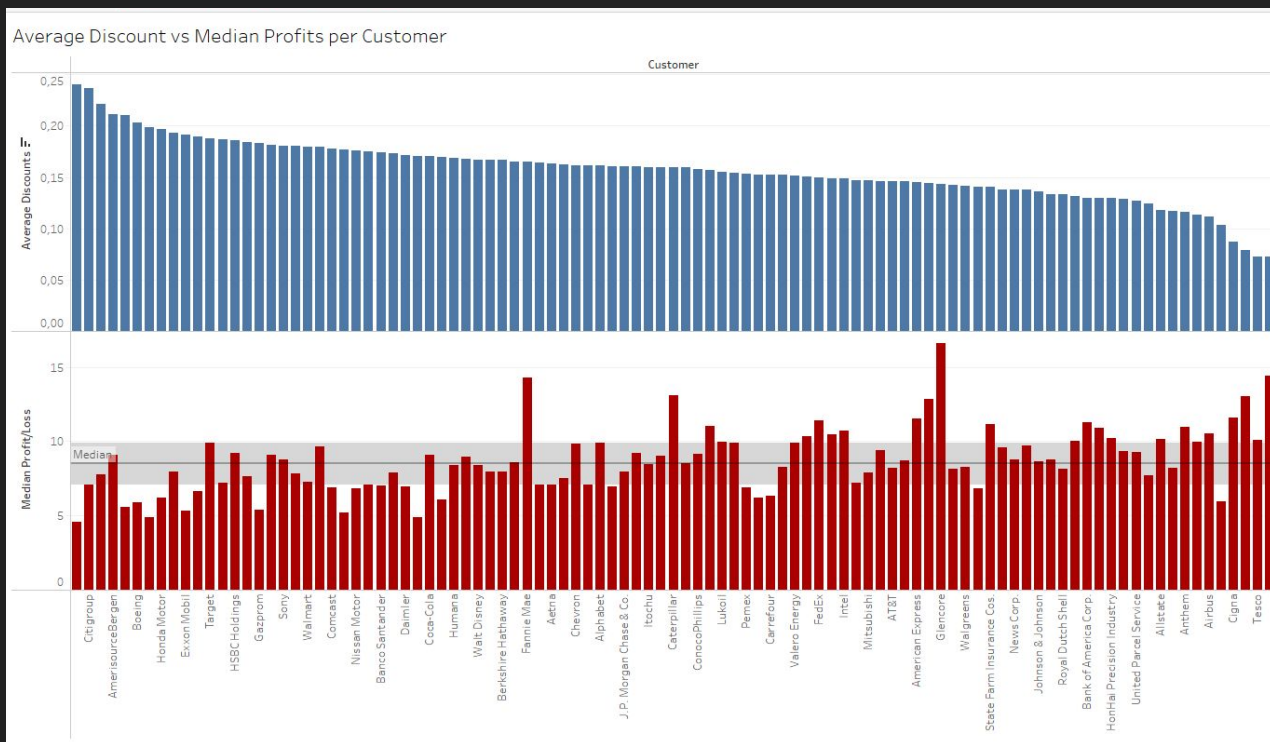
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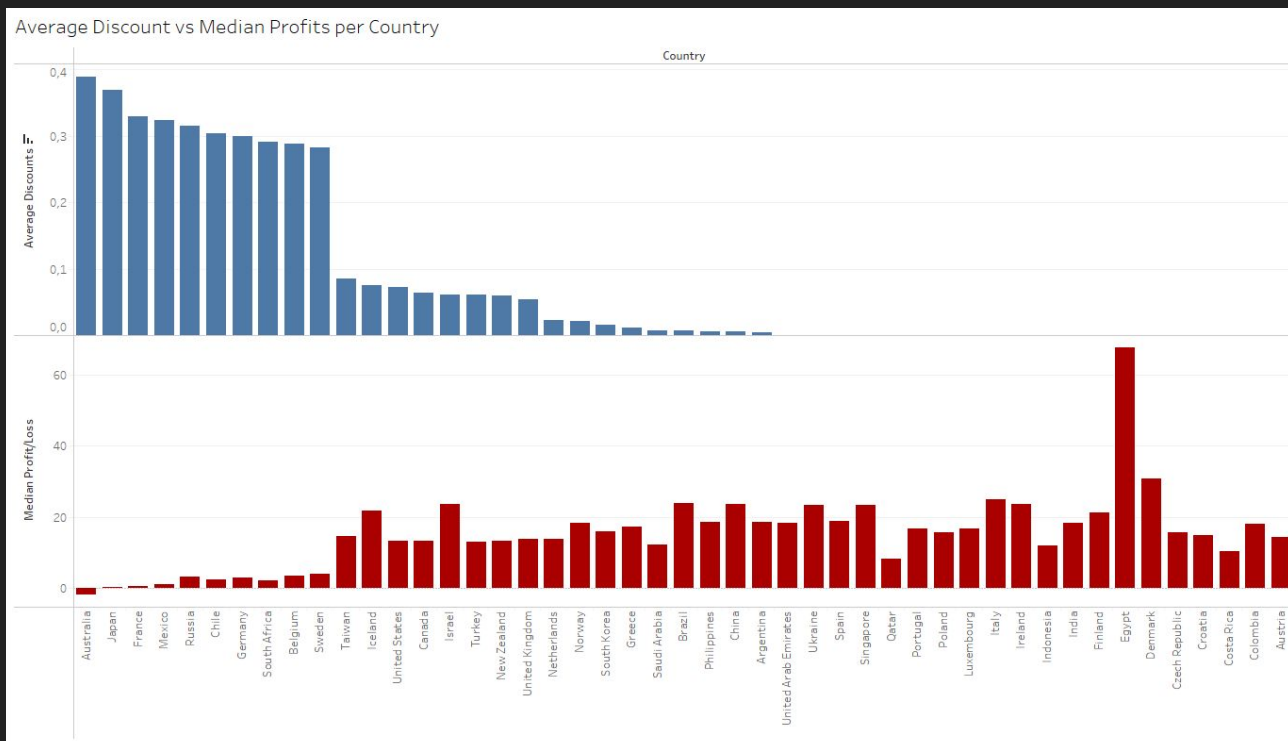- **Next Steps for this Company**

The Following Suggestions can be Acted Upon:

- Cease using discounts above 20% by the end of 2024.
    - Cease offering discounts above 40% with immediate effect.
    - For customers acclimated to discounts between 20% and 40%, try to bring the average discount levels to below 20% by the end of 2024, and below 10% by the end of 2025.
- Reach 25% of transactions given discounts in Japan, France, Australia, Mexico, Germany, Sweden, Chile, South Africa, Russia and Belgium by end of 2024, instead of 100% according to this data.
    - If discounts must be offered, the maximum discount offered should be 20%.
- Where there are no discounts but profits remain high, try marketing in those places more, such as…

The Ideal Example to Follow: Egypt

No discounts but profits and sales remain high

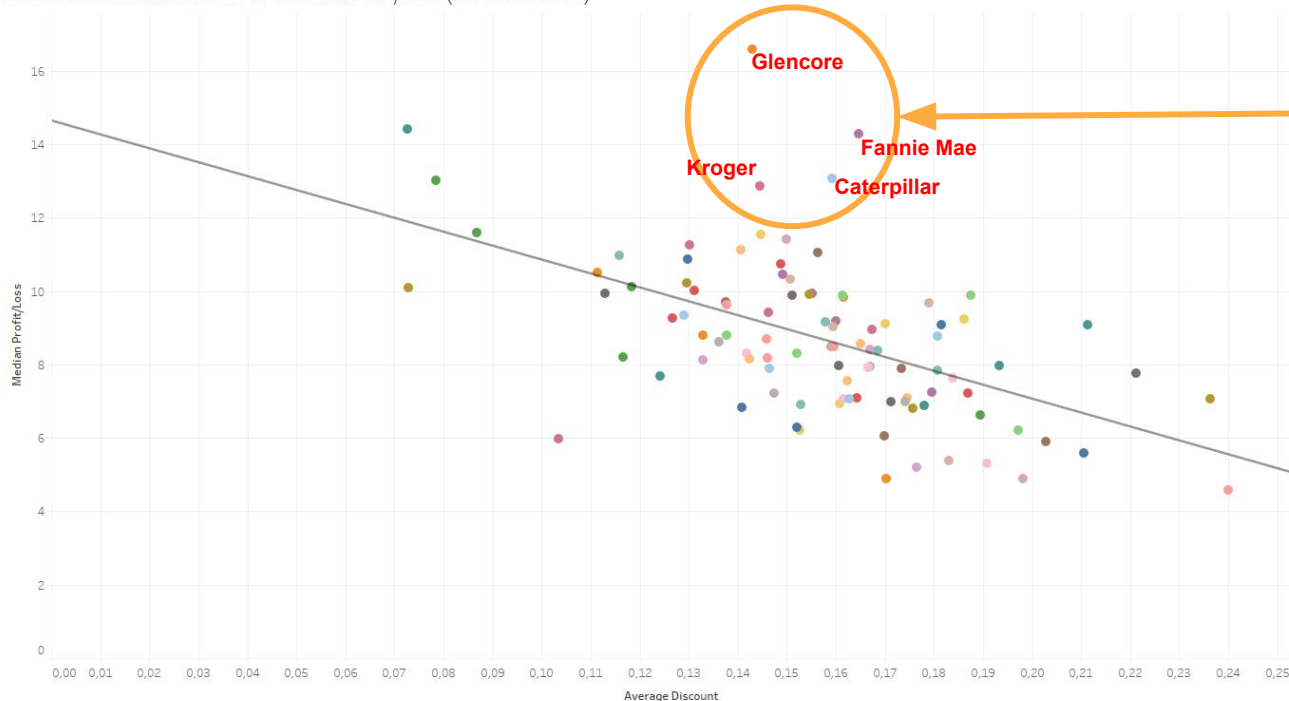**Analyze the following details for these transactions:**

- What exactly did they buy?
- Was it exactly what they needed?
- Why did they buy it without any discount?
- If one of our salesmen pitched the product to them first, how did they pitch it?

	Order Date	Contact Name	Country	City	Customer	Customer ID	Industry	Segment	Product	License	Sales	Quantity	Discount	Profit/Loss	Result
2234	2023-12-06	Pippa Hunter	Egypt	Cairo	Samsung Electronics	1015	Tech	Strategic	Data Smasher	T0U43N7WZ0	205.03	7	0.0	67.6599	Profit
5274	2021-11-07	Alexander Hill	Egypt	Cairo	Philip Morris International	1075	Consumer Products	SMB	FinanceHub	6MIT3WMKML	715.20	3	0.0	178.8000	Profit
8798	2022-04-07	Madeleine Smith	Egypt	Cairo	BMW	1039	Manufacturing	Enterprise	Site Analytics	VF0PL4R7UY	1294.75	5	0.0	336.6350	Profit
9146	2022-01-23	Felicity King	Egypt	Cairo	CVS Health	1026	Retail	Strategic	Data Smasher	LCLRT65YV7	99.98	2	0.0	42.9914	Profit
9147	2022-01-23	Felicity King	Egypt	Cairo	CVS Health	1026	Retail	Strategic	ChatBot Plugin	JCHH1VW2I7	8.04	6	0.0	2.7336	Profit
9148	2022-01-23	Felicity King	Egypt	Cairo	CVS Health	1026	Retail	Strategic	Marketing Suite - Gold	YPU02KGNRF	1564.29	13	0.0	406.7154	Profit
9386	2023-01-20	Sean Morrison	Egypt	Cairo	News Corp.	1071	Misc	SMB	Support	GZDB8X8BGF	79.92	4	0.0	37.5624	Profit
9387	2023-01-20	Sean Morrison	Egypt	Cairo	News Corp.	1071	Misc	SMB	Support	148ALD3CHM	12.28	1	0.0	5.7716	Profit
9388	2023-01-20	Sean Morrison	Egypt	Cairo	News Corp.	1071	Misc	SMB	OneView	QXY81KQ2EV	542.94	3	0.0	152.0232	Profit
9389	2023-01-20	Sean Morrison	Egypt	Cairo	News Corp.	1071	Misc	SMB	SaaS Connector Pack - Gold	NDWM70GA20	2.04	1	0.0	0.9588	Profit
9741	2021-11-08	Pippa Hunter	Egypt	Cairo	Samsung Electronics	1015	Tech	Strategic	Marketing Suite	OO12JK36OM	4404.90	5	0.0	1013.1270	Profit

If Discounts are Still to be Used, Look at these Companies…

They were given quite high discounts but we still got high profits

Relation between Discount vs Median Profit/Loss (For Customers)

Glencore
Fannie Mae
Kroger
Caterpillar

Median Profit/Loss
Average Discount

Analyze the following details for these companies:

- Where the sales and losses come from
- Our current relations with these companies
- How satisfied they are with our products

Ask them these questions:

- What sealed the deal for you?
- Would you have bought our products if there was no discount?
- Would you be willing to stick with us if we lowered discounts in the future?

…And these Companies:

They were given quite high discounts but made many transactions with us.

Relation between Discount vs Transaction Count (For Customers)

Allianz   Tyson Foods
Ford
Comcast   Siemens
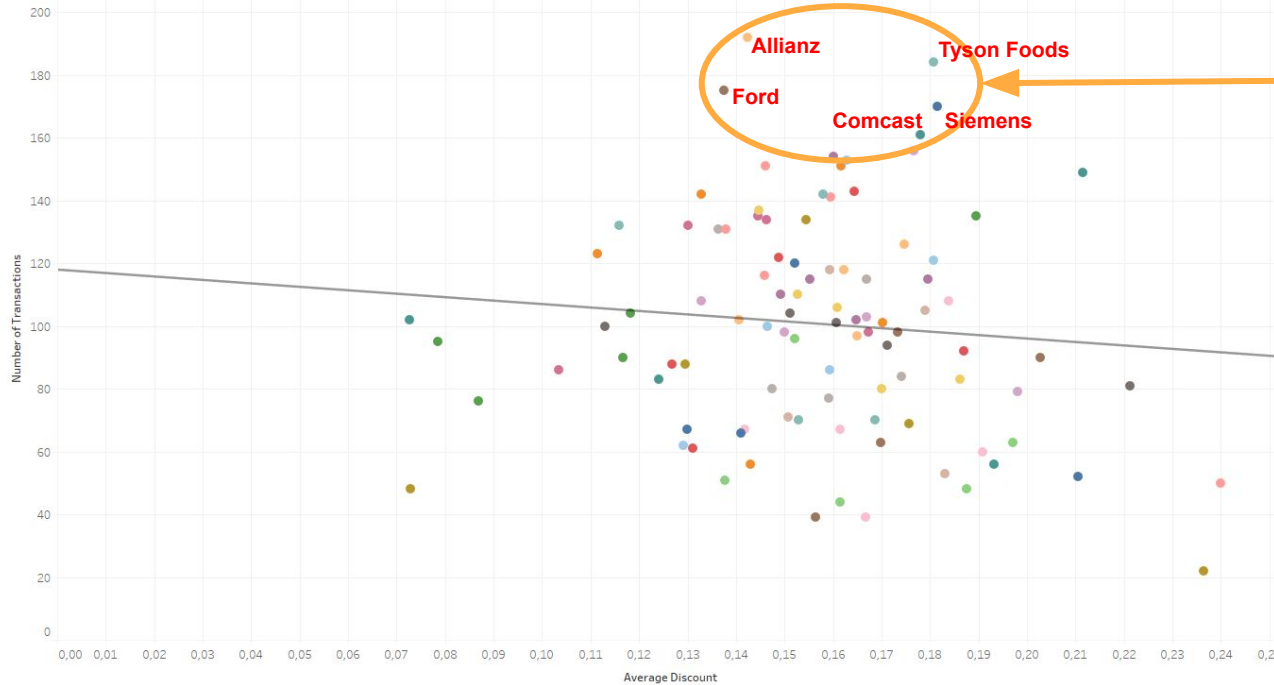
Analyze the following details for these companies:

- What they bought
- The prices of each product
- Length of their subscriptions

Ask them these questions:

- How are you liking our products so far?
- What parts of our products did you find challenging to use, or otherwise lacking?
- Would you be willing to pay for those services if they had high prices?

Links:

[Github](#)

[Google Drive with this Presentation and Video Recording](#)

[Tableau Public Dashboard](#)