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CONJOINT ANALYSIS

1. OVERVIEW

Conjoint Analysis is when we present a customer with a number of options and derive the underlying utilities and preferences by looking at the choices they made. Rather than asking a customer what they prefer, we give them a list of options and observe the choices they make. From the choices the customer makes, we derive their likely set of preferences, utility function.

The main benefit from a Conjoint Analysis is its flexibility and adaptability to needs. We can change the preferences to replicate realistic choices. Once the preferences have been derived, we are able to conduct further analysis on them. We are able to obtain Partworths for each attribute level, Attribute Importance of each attribute, Willingness to pay for each non-price attribute level, Optimal price, Maximum profit and Market share associated with optimal price.

2. ANALYSIS FINDINGS

Sreeja	Partworths: Screen size (75" and 85"), resolution (4K), and brand (Sony) have positive values, indicating a preference for larger screens, higher resolution, and Sony brand. The negative value for high price indicates a preference for lower prices. Attribute Importance: The most important attribute is resolution (42.43%), followed by screen size (36.00%), price (16.70%), and brand (4.87%). Willingness to Pay: Higher willingness to pay for resolution (4K) and screen size (85"), with lesser emphasis on the brand.

	Optimal Price: $2200. Maximum Profit: $3307.091. Market Share at Optimal Price: Approximately 0.1653546.
Sujai	Partworths: Similar to Sreeja, Sujai shows a preference for larger screens, higher resolution, and the Sony brand. A higher negative value for a high price indicates a stronger preference for lower prices. Attribute Importance: Screen size is the most important (41.28%), followed by resolution (29.36%), price (18.35%), and brand (11.01%). Willingness to Pay: High willingness to pay for screen size (85") and resolution (4K). Optimal Price: $2100. Maximum Profit: $2688.019. Market Share at Optimal Price: Approximately 0.2688019.
Sushma	Partworths: Indicates preferences similar to the others for screen size, resolution, and brand. The negative value for high price is consistent with a preference for lower prices. Attribute Importance: Screen size (41.38%) and resolution (24.83%) are the most important, followed by price (22.76%) and brand (11.03%). Willingness to Pay: Willingness to pay is highest for screen size (85") and resolution (4K). Optimal Price: $2100.

	Maximum Profit: $2490.374. Market Share at Optimal Price: Approximately 0.2490374.
Krittika	Partworths: Shows a strong preference for larger screen sizes and a significant negative value for high price. Attribute Importance: Screen size (39.47%) and price (35.53%) are most important, followed by resolution (19.74%) and brand (5.26%). Willingness to Pay: Higher willingness to pay for screen size (75" and 85") and resolution (4K). Optimal Price: $2100. Maximum Profit: $1418.434. Market Share at Optimal Price: Approximately 0.1418434.
Ruben	Partworths: Indicates a strong preference for higher resolution and larger screen size, and a negative preference for high price. Attribute Importance: Resolution (51.25%) is the most important attribute, followed by screen size (30.96%), price (12.81%), and brand (4.98%). Willingness to Pay: High willingness to pay for resolution (4K) and screen size (85"). Optimal Price: $2200. Maximum Profit: $4607.553 . Market Share at Optimal Price:

	Approximately 0.2303776.

Attribute	Aspect	Sreeja	Sujai	Ruben	Krittika	Sushma
Screen Size	Coefficient Significance	Strong Preference for larger Screens.	Strong Preference for larger Screens.	Very Strong Preference,especially for 85-inch	Moderate Preferences for larger screens	Strong Preference for larger Screens.
	Attribute Importance	High to Screen size	Highest to screen size	High to screen size	Slightly less importance	High to Screen size
	Willingness to pay	Moderate to pay more for larger screens	High to pay more for larger screens	High to pay more for larger screens	Moderate to pay more for larger screens	Moderate to pay more for larger screens
Resolution (4K)	Coefficient Significance	Strong Preference	Strong Preference	Very strong Preference	Moderate Preference	Strong Preference
	Attribute Importance	High	High	High	Moderate	High
	Willingness to pay	Willing to pay more for 4k , less than Ruben.	Willing to pay more for 4k	Highest Willingness to pay	Willingness to pay	Highest Willingness to pay but, less than ruben
Brand (SONY)	Coefficient Significance	Low	Moderate	Moderate	Low	Moderate
	Attribute Importance	Low	Moderate	Moderate	Low	Moderate
	Willingness to pay	Low	Moderate	Moderate	Low	Moderate

Price	Coefficient Significance	Negative	Negative	Negative	Most Negative	Negative
	Attribute Importance	Moderate Sensitivity to price	Moderate Sensitivity to price	Low Sensitivity to price	Highest Sensitivity to price	Moderate Sensitivity to price
	Willingness to pay	Prefers lower prices	Prefers lower prices	Less sensitive to higher prices	Strong Preference for lower prices	Prefers lower prices

Willingness to pay		Sreeja	Sujai	Ruben	Krittika	Sushma
	Screen 75 inch	$937.50	$600	$666.67	$444.44	$659.09
	Screen 85 inch	$1078.13	$1125	$1208.33	$555.56	$909.09
	Resolution 4k	$1270.83	$800	$2000	$277.78	$545.45
	Brand SONY	$145.83	$300	$194.44	$74.07	$242.42

Observations:

Screen Size: Everyone shows a preference for larger screens, with Sujai and Ruben willing to pay more for the 85 inch screen.

Resolution (4K): A strong preference is seen across everyone, particularly in Ruben and Sreeja.

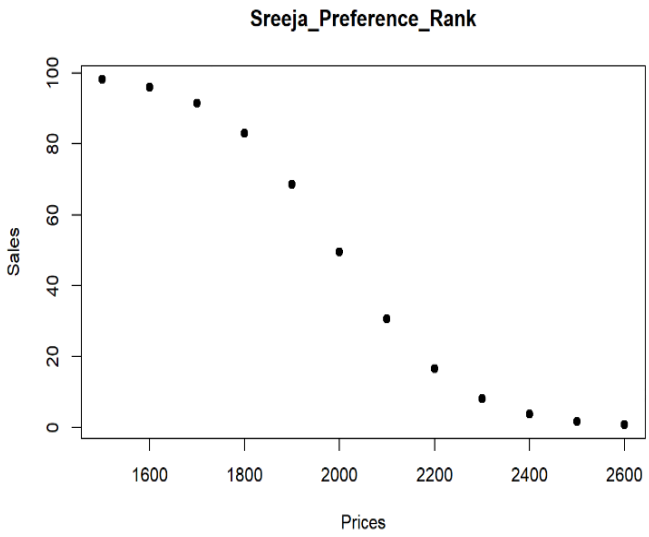
Brand (Sony): Sujai and Sushma show a moderate preference for the Sony brand, whereas others are less influenced.

Price Sensitivity: Krittika is most sensitive to price, followed by Sushma. Others also prefer lower prices, but to a lesser extent.

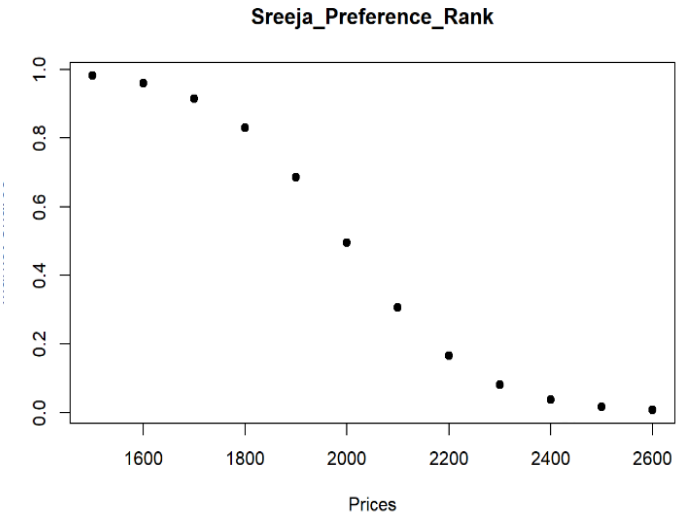
Attribute Importance: Screen size and resolution are generally the most.

3. MARKET SHARES vs PRICE ANALYSIS

Sales vs. Prices

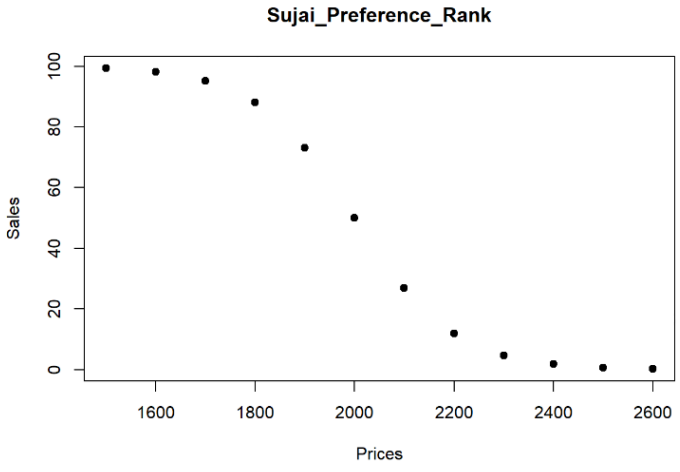


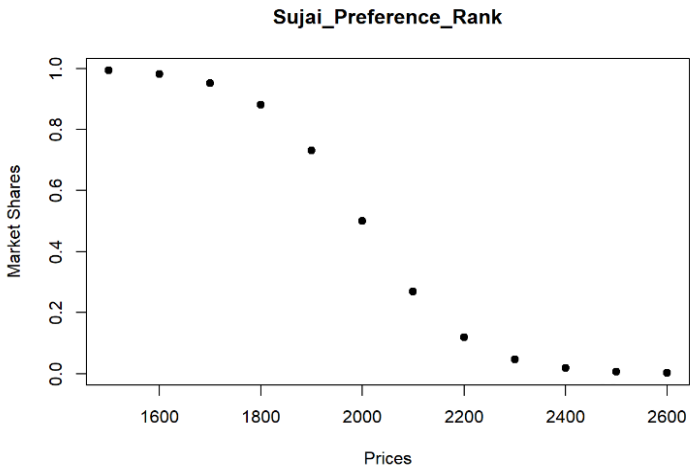
Market Shares vs Prices



- **Sales vs. Prices:** The preferences are varied across the sales volume, not showing a specific trend towards high or low prices.

- **Market Shares vs. Prices:** Points are distributed across the plot with no discernible pattern, indicating no strong correlation between market share preference and price.

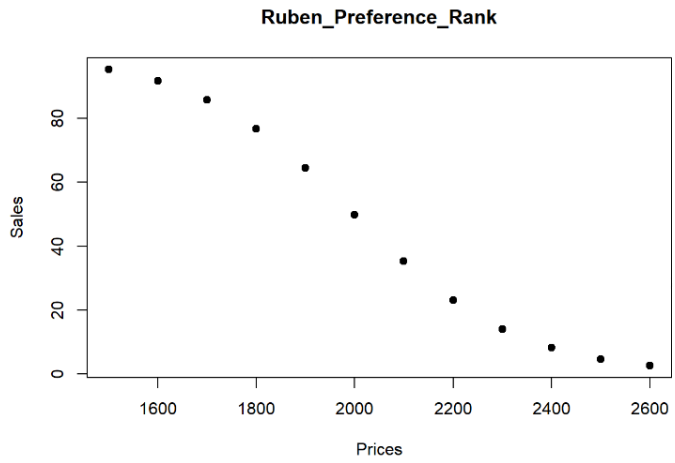




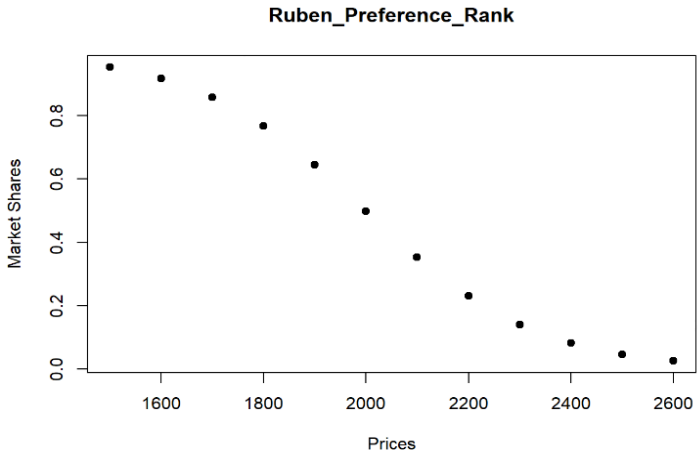
- **Sales vs. Prices:** There is a variety of preferences across different sales levels and prices, showing no particular pattern or trend.

- **Market Shares vs. Prices:** Points are spread without a clear direction, suggesting that Sujai's market share preferences are not dependent on price.

Sales vs. Prices

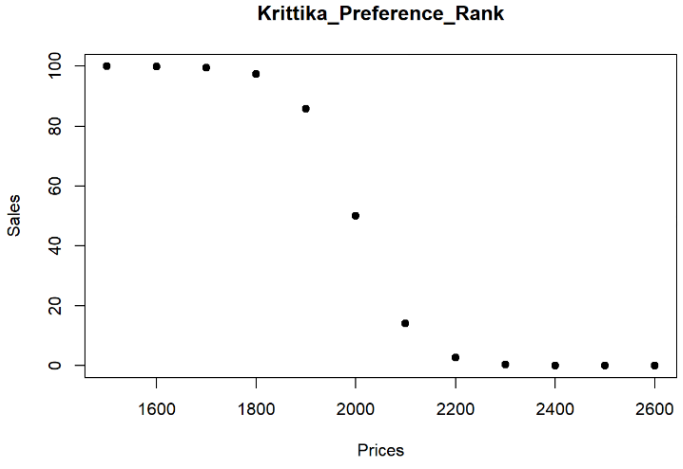


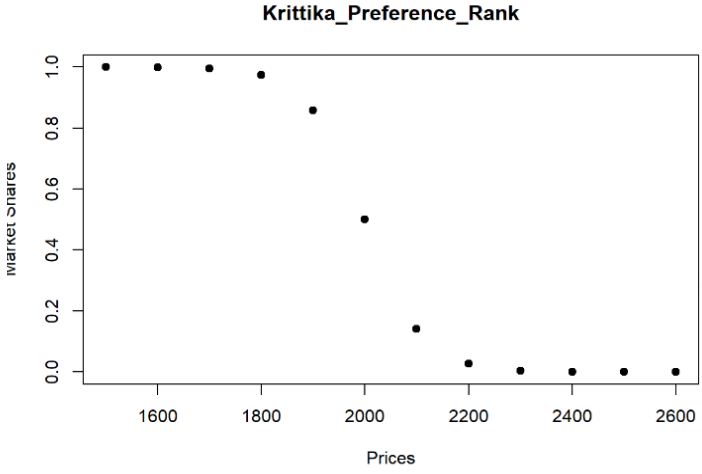
Market Shares vs Prices



- **Sales vs. Prices:** Points are somewhat spread out, with no obvious trend indicating price sensitivity regarding sales.

- **Market Shares vs. Prices:** This plot also shows a spread of points, suggesting a range of preferences with no clear bias towards higher or lower market shares based on the price.

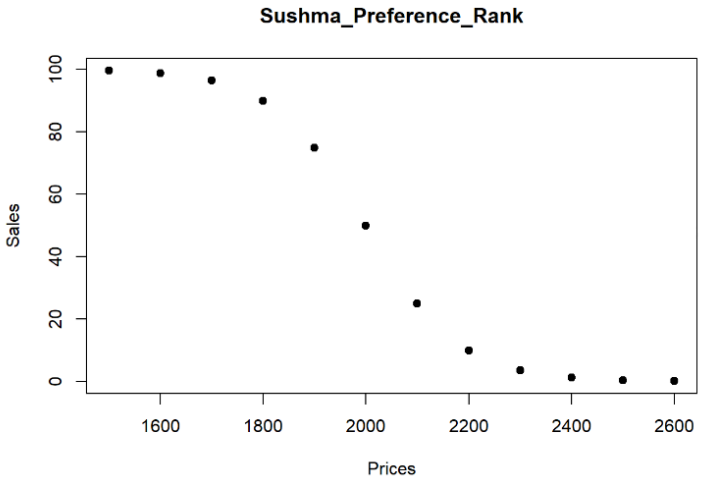




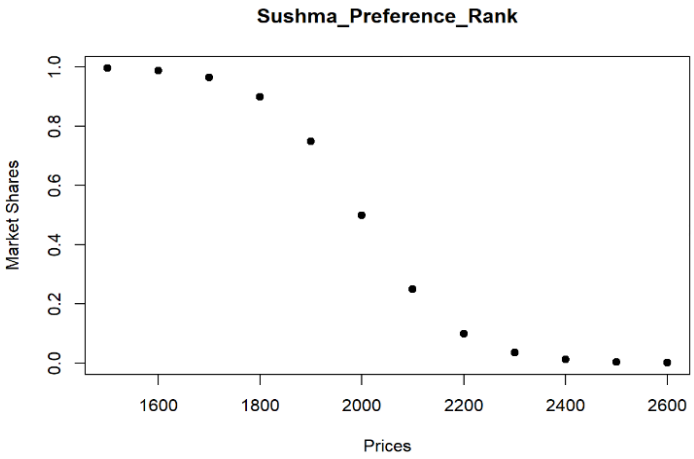
- **Sales vs. Prices:** There is no clear trend relating prices to sales, suggesting Krittika's sales preferences are not strongly dictated by the price.

- **Market Shares vs. Prices:** The market share preferences are also scattered across various price points, indicating no strong price preference driving market share choices.

Sales vs. Prices



Market Shares vs Prices

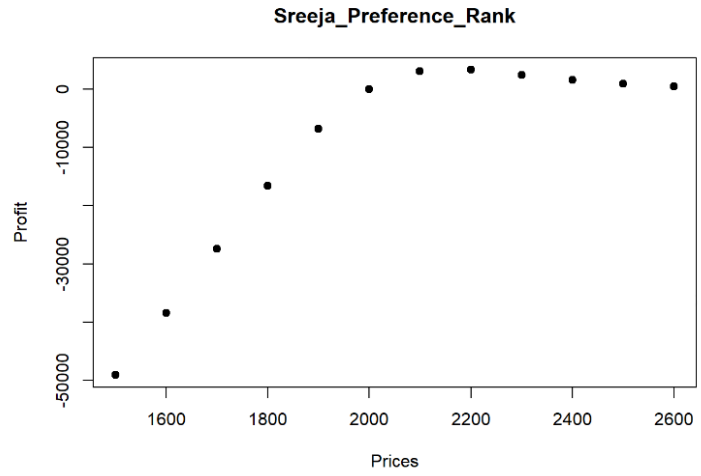


- **Sales vs. Prices:** No clear pattern. Preferences for sales volume appear independent of price.

- **Market Shares vs. Prices:** Varied preferences. No strong correlation between market share and price.

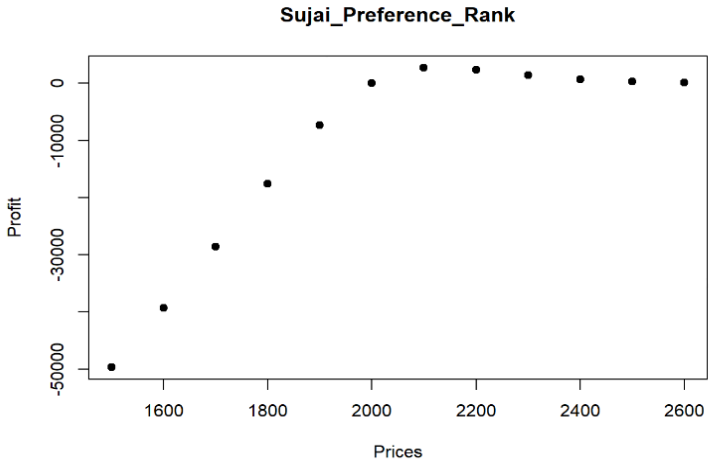
Conclusion: For sales, individuals do not exhibit consistent preferences at varying price levels, indicating a mix of factors influences their purchasing decisions. Regarding market shares, there is also no strong correlation with prices across individuals, suggesting brand or product features may play a significant role in preferences.

4. PROFIT vs PRICE ANALYSIS



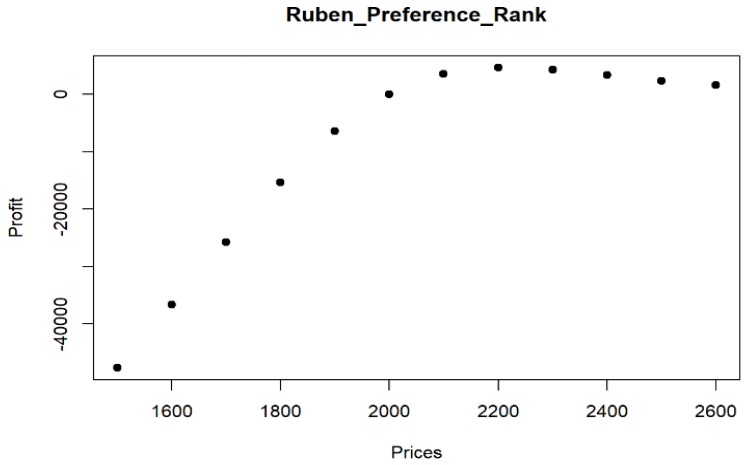
Profit vs Prices

Preferences are varied across price range; no obvious correlation with profit.



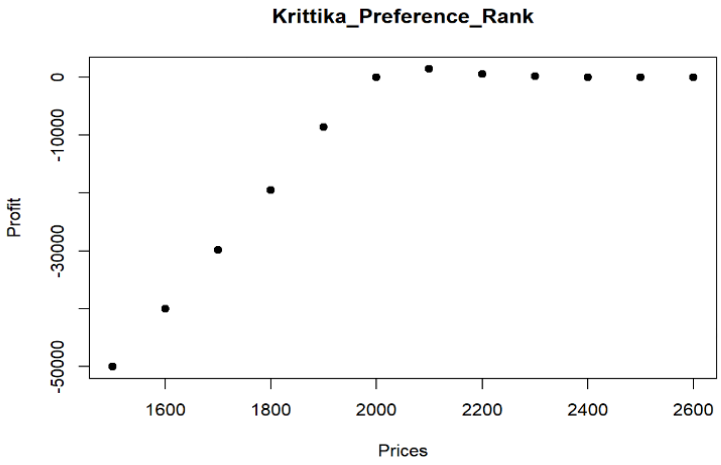
Profit vs Prices

Shows scattered preferences; no strong profit preference linked to price.



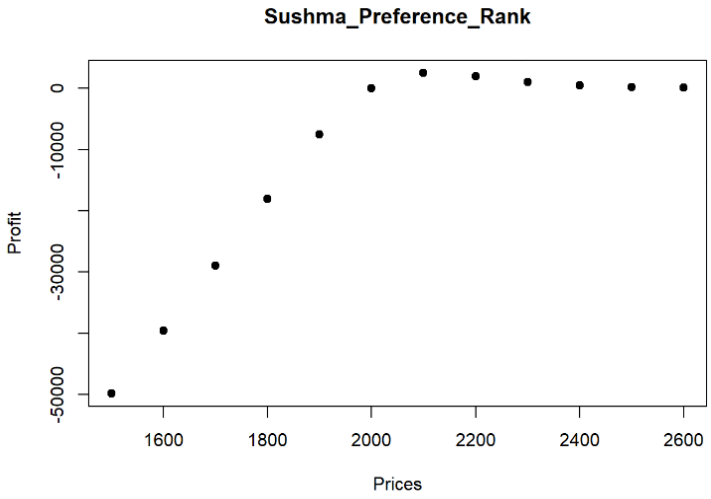
Profit vs Prices

Preferences appear scattered; no clear trend linking profit and price.



Profit vs Prices

Shows scattered preferences; price does not consistently influence profit preferences.



Profit vs Prices

Data points are spread; no evident pattern between profit and price preferences.

Conclusion: The "Profit vs. Prices" plots consistently show no clear trend or pattern linking profit to price across all individuals, indicating that price alone may not be the defining factor in determining profit preference. Preferences for profit appear varied at different price points, suggesting that other factors besides price may influence perceived profitability or value.

Overall, individual consumer decisions are likely influenced by a combination of price, quality, brand, and other TV profile features rather than price alone.