Problem: Since word of mouth is a powerful tool for promoting a business, Brand X is really interested in knowing how well does brand favorability impact recommendation. Can you decipher the strength and nature of this relationship and quantify it so it can be used for predictive purposes?

Solution: Here **Q5_1**(Brand X brand favorability impact) is independent variable and **Q7_1** (Brand X brand recommendation) is dependent variable.

Since we have one independent variable and one dependent variable, and both are interval scale so we will perform the Simple Linear Regression to built the relationship between these variables.

Null Hypothesis H_0: There is no linear relationship between brand favorability for Band X with Brand recommendation for Brand X

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.620[a]	.385	.385	.853

a. Predictors: (Constant), BrandX (What is your overall opinion of each of the following automotive brands?)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4830.651	1	4830.651	6636.321	.000[b]
	Residual	7722.407	10609	.728		
	Total	12553.058	10610			

a. Dependent Variable: BrandX (How likely are you to recommend each of the following brands to a friend, family member, or a colleague?)

b. Predictors: (Constant), BrandX (What is your overall opinion of each of the following automotive brands?)

The above table shows the summary of linear regression model build through SPSS using the given dataset, we can say there is **moderate positive correlation** between brand favorability and recommendation with $r = 0.620$, $p < 0.001$

And Since R squared is 0.385, we can say that **38.5% variance in brand recommendation is explained by brand favorability** for Band X.

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-.087	.035		-2.469	.014
	BrandX (What is your overall opinion of each of the following automotive brands?)	.788	.010	.620	81.464	.000

a. Dependent Variable: BrandX (How likely are you to recommend each of the following brands to a friend, family member, or a colleague?)

For the regression, we can **reject the null hypothesis** and can say that there is nonzero slope coefficient, 0.788 that can describe the relation as $p < 0.001$ for Brand Favorability coefficient and moreover there is nonzero constant value that is -0.087, $p = 0.014$ (< 0.05).

Brand Recommendation = -0.087 (constant) + 0.788 * (Brand Favorability)

From the above equation, we can say that a unit change in Brand Favorability can impact the brand recommendation by 0.788, that if brand favorability increase by 1 unit the brand recommendation will increase by 0.788.