Marketing Research and Analytics in Business Markets

Research Report

Tringa Demiri
Karl Franzens Univerität

June 5, 2025

Contents

1. Data Analysis

The dataset provided was clean and free from formatting issues or missing data. Therefore, there was no need for data cleaning, recoding of items, or omission of cases. The analysis focused specifically on four constructs: *Satisfaction*, *Trust*, *Word of Mouth*, and *Repurchase Intention*, as these are central to the research objective. The aim is to explore how **Satisfaction**, **Trust**, and **Repurchase Intention** influence **Word of Mouth** within the dataset using SPSS.

To visually inspect potential outliers, box plots were created for each item within the four examined constructs: *Word of Mouth (WOM1–WOM5)*, *Satisfaction (SAT1–SAT5)*, *Trust (TRUST1–TRUST5)*, and *Repurchase Intention (RPI1–RPI4)*. The visualizations are shown in Figure 1 and Figure 2.

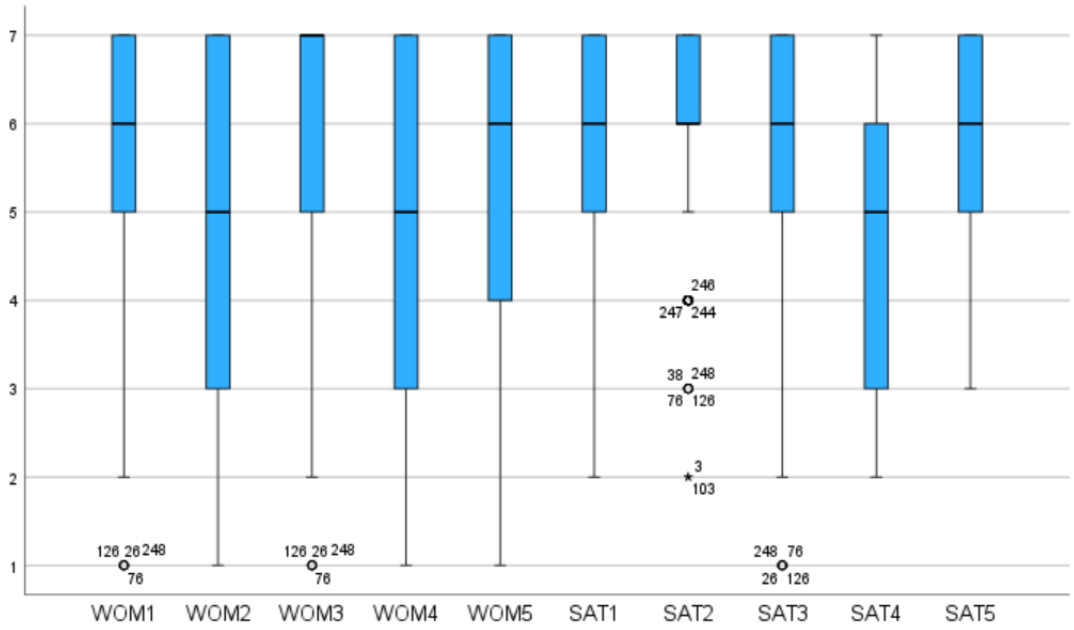

Figure 1: Boxplots for WOM1–WOM5 and SAT1–SAT5

In all four scales, the majority of responses lie in the upper part of the Likert scale (between 5 and 7), indicating an overall positive evaluation by the respondents. However, some individual outliers are present:

- **SAT3 and SAT4:** Slightly deviating values below 3 (e.g., cases 3, 76, 126)
- **TRUST5:** One extreme outlier with a value of 1 (case 39)
- **RPI2–RPI4:** Isolated low values (e.g., cases 8, 50, 248)

These outliers are considered valid responses with plausible content. Since they are isolated and the dataset is otherwise complete and consistent, no data points were excluded from further analysis.

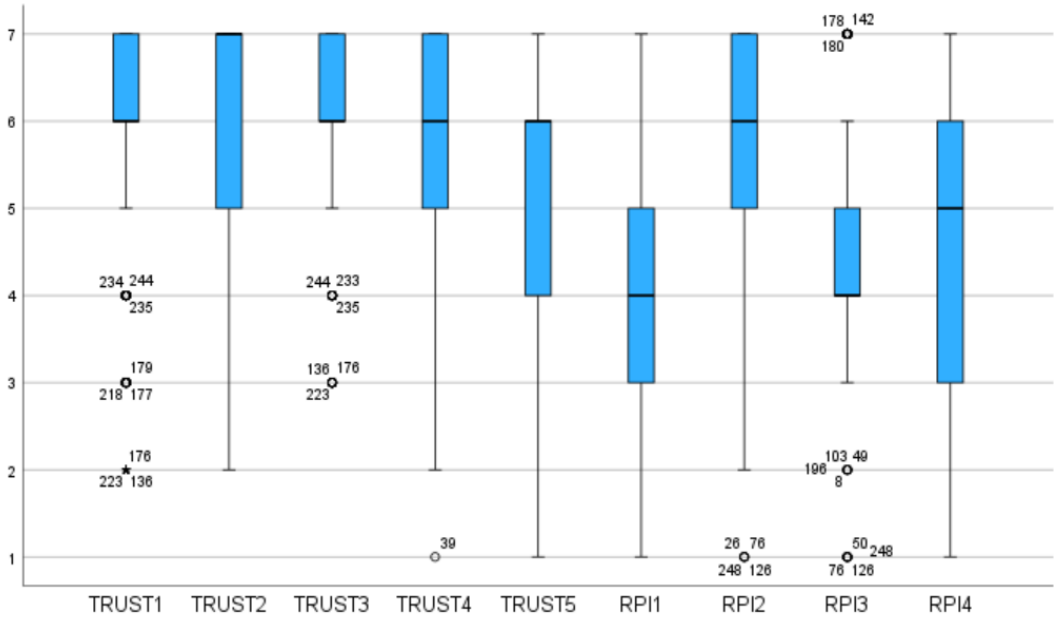

Figure 2: Boxplots for TRUST1–TRUST5 and RPI1–RPI4

2. Factor Analysis

Factor Analysis can be made on SPSS through following "Analysieren- Diemensionsreduktion - Faktorenanalyse". In the case of this research project a Factor Anylysis was done for WOM 1-5; SAT 1-5; TRUST 1-5; RPI 1-4.

Factor Analysis - WOM

An exploratory factor analysis was conducted on the five items measuring *Word of Mouth (WOM1–WOM5)* using Principal Component Analysis (PCA). The Kaiser-Meyer-Olkin measure and Bartlett's Test (not shown) indicated that the data were suitable for factor analysis.

Based on the Kaiser criterion (eigenvalue ≥ 1) and visual inspection of the scree plot (see Figure 3), only **one component** was extracted, explaining **77.29%** of the total variance.

All five WOM items showed strong loadings on this component (ranging from .814 to .906, see Table 1), confirming a unidimensional structure.

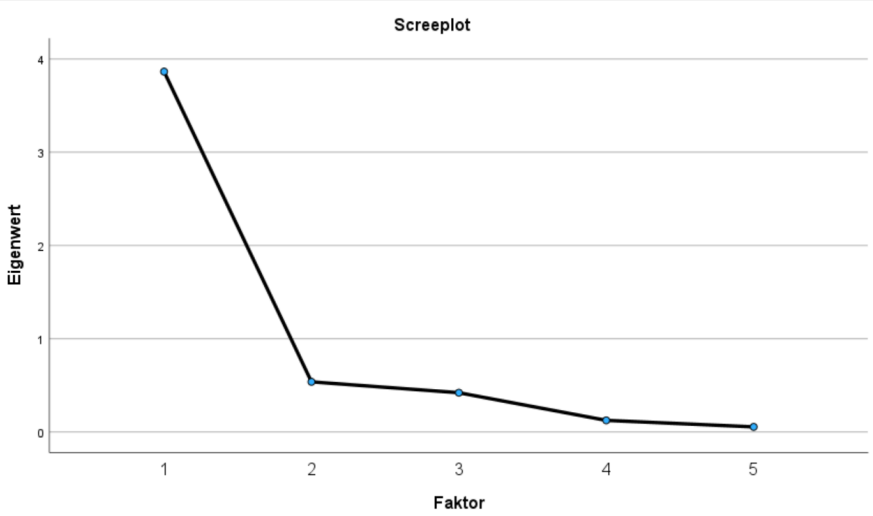

Figure 3: Scree plot for WOM1–WOM5

Table 1: Component matrix for WOM1–WOM5

Item	Component 1
WOM1	.904
WOM2	.894
WOM3	.874
WOM4	.814
WOM5	.906

Factor Analysis – Repurchase Intention (RPI)

To examine the dimensionality of the *Repurchase Intention* scale (RPI1–RPI4), a Principal Component Analysis (PCA) was conducted. Based on the Kaiser criterion (eigenvalue ≥ 1), only **one component** was extracted, which accounted for **68.7%** of the total variance (see Table 2).

The communalities of the items ranged from .640 to .763, indicating that a substantial proportion of each item's variance is explained by the extracted component (see Table 3). Therefore, the RPI scale can be considered unidimensional and suitable for further analyses using a single composite score.

Table 2: Explained variance – Repurchase Intention

Component	Eigenvalue	% of Variance	Cumulative %
1	2.748	68.700	68.700

Table 3: Communalities – Repurchase Intention

Item	Extraction
RPI1	.640
RPI2	.679
RPI3	.666
RPI4	.763

Factor Analysis - Satisfaction (SAT)

A Principal Component Analysis (PCA) was conducted on the five items of the *Satisfaction* scale (SAT1–SAT5). The analysis yielded a clear one-factor solution based on the Kaiser criterion (eigenvalue ≥ 1), with only one component extracted that explained **80.41%** of the total variance (see Table 4).

Communalities ranged from .581 to .904, indicating that the items are well represented by the single factor and share a strong common variance (see Table 5). The results support a unidimensional interpretation of the Satisfaction construct.

Table 4: Explained variance – Satisfaction

Component	Eigenvalue	% of Variance	Cumulative %
1	4.021	80.412	80.412

Table 5: Communalities – Satisfaction

Item	Extraction
SAT1	.839
SAT2	.885
SAT3	.813
SAT4	.581
SAT5	.904

Factor Analysis – Trust

To validate the dimensionality of the *Trust* scale (TRUST1–TRUST5), a Principal Component Analysis (PCA) was conducted. Based on the Kaiser criterion (eigenvalue ≥ 1), a one-factor solution emerged. The first component had an eigenvalue of 4.106 and accounted for **82.11%** of the total variance (see Table 6).

Communalities ranged from .750 to .916, indicating that each item shared substantial variance with the extracted factor (see Table 7). These findings confirm the unidimensionality and internal consistency of the Trust scale.

Table 6: Explained variance – Trust

Component	Eigenvalue	% of Variance	Cumulative %
1	4.106	82.110	82.110

Table 7: Communalities – Trust

Item	Extraction
TRUST1	.750
TRUST2	.916
TRUST3	.875
TRUST4	.764
TRUST5	.800

3. Reliability Analysis

To do a Realiability Analysis, Cronbach's Alpha values need to be reported and interpreted for each scale. On SPSS the following steps need to be followed in order for such a analysis to be conducted: "Analysieren - Metrisch - Reliabilitätsanalyse". To assess the internal consistency of the *Word of Mouth* scale (WOM1–WOM5); *Repurchase Intention* scale (RPI1–RPI4);*Satisfaction* scale (SAT1–SAT5); *Trust* scale (TRUST1–TRUST5), Cronbach's Alpha was calculated. The analysis included all 250 valid cases without missing values.

Reliability Analysis – Word of Mouth

The result showed excellent reliability with a Cronbach's Alpha of **.923**, indicating a high level of internal consistency among the five WOM items. The corrected item-total correlations ranged from **.725 to .847**, and the analysis showed that removing any individual item would not improve the overall reliability (see Table 8).

Table 8: Reliability statistics – WOM1–WOM5

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
WOM1	.829	.901
WOM2	.834	.899
WOM3	.791	.908
WOM4	.725	.922
WOM5	.847	.895

The scale mean was 5.29 (range: 4.77 to 5.82), confirming generally high ratings by respondents.

Reliability Analysis – Repurchase Intention

The result yielded a Cronbach's Alpha of **.846**, indicating good internal consistency of the four items. Corrected item-total correlations ranged from **.646 to .753**, suggesting that all items contribute meaningfully to the overall scale (see Table 9).

Removing any item would not lead to a substantial improvement in reliability. The scale mean was 4.65, with a range from 4.15 to 5.62, indicating a generally positive response trend.

Table 9: Reliability statistics – RPI1–RPI4

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
RPI1	.646	.821
RPI2	.678	.807
RPI3	.667	.814
RPI4	.753	.773

Reliability Analysis – Satisfaction

The result showed great internal consistency with a Cronbach's Alpha of **.933**. Corrected item-total correlations ranged from **.659 to .923**, suggesting that all items contribute substantially to the overall scale reliability (see Table 10).

The highest reliability was observed when all items were retained. Item SAT4 showed slightly lower correlation, but still within acceptable range. The scale mean was 5.55, indicating generally high satisfaction across participants.

Table 10: Reliability statistics – SAT1–SAT5

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
SAT1	.848	.912
SAT2	.892	.906
SAT3	.830	.916
SAT4	.659	.952
SAT5	.923	.899

Reliability Analysis – Trust

The result showed a very high internal consistency with a Cronbach's Alpha of **.943**. Corrected item-total correlations ranged from **.789 to .924**, indicating that all items contribute strongly to the reliability of the scale (see Table 11).

The internal consistency would not improve by excluding any of the five items. The item means were high (M = 5.73), suggesting generally strong trust perceptions among respondents.

Table 11: Reliability statistics – TRUST1–TRUST5

Item	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
TRUST1	.789	.940
TRUST2	.924	.915
TRUST3	.893	.924
TRUST4	.806	.937
TRUST5	.836	.931

4. Descriptive Statistics

4.1. Mean and Standard Deviation

For this subsection the means of the Variables were calculated through the formula `MEAN(WOM1, WOM2, WOM3, WOM4, WOM5)` and this was repeated for SAT, RPI and TRUST. A summary table for mean and standard division was conducted by following the steps: "Analysieren - Deskriptive Statistiken - Daskriptive Statistik", where the created means in the step beforehand were selected.

Table 12: Descriptive statistics for the main constructs

Variable	**Mean**	**Standard Deviation**
Word of Mouth (WOM_Mean)	5.2904	1.57235
Repurchase Intention (RPI_Mean)	4.6520	1.25567
Satisfaction (SAT_Mean)	5.5496	1.24140
Trust (TRUST_Mean)	5.7344	1.22406

Table 12 presents the descriptive statistics for the four main constructs. Trust (M = 5.73, SD = 1.22) and Satisfaction (M = 5.55, SD = 1.24) exhibit the highest average ratings among participants, suggesting generally positive evaluations. Word of Mouth follows closely with a mean of 5.29 (SD = 1.57), though it shows slightly higher variability, indicating more diverse responses. Repurchase Intention has the lowest mean score (M = 4.65, SD = 1.26), suggesting a relatively more cautious or uncertain attitude toward future purchasing behavior, this is not to be seen as a negative, since it is on the behavior of people to be unsure for the future in general. Overall, the results reflect favorable perceptions across constructs, with Trust emerging as the strongest dimension.

5. Correlation Analysis

The correlation matrix on SPSS can be conducted by following the steps "Analysieren - Korrelation - Bivariate" and in this case the means of the selected variables were taken into consideration. The correlation matrix in Table 13 shows significant positive relationships between all four constructs. *Satisfaction* is strongly correlated with *Trust* ($r = .864$), *Word of Mouth* ($r = .724$), and *Repurchase Intention* ($r = .717$), all significant at the $p < .01$ level. Similarly, *Trust* is significantly associated with both *Word of Mouth* ($r = .680$) and *Repurchase Intention* ($r = .666$). Notably, *Word of Mouth* and *Repurchase Intention* also show a strong correlation ($r = .718$). These results suggest a coherent and interconnected structure among the studied constructs, with higher satisfaction and trust levels likely contributing to increased word-of-mouth behavior and repurchase intention.

Table 13: Pearson correlations between the main constructs (N = 250)

Variable	SAT_Mean	WOM_Mean	TRUST_Mean	RPI_Mean
SAT_Mean	1	**.724****	**.864****	**.717****
WOM_Mean	**.724****	1	**.680****	**.718****
TRUST_Mean	**.864****	**.680****	1	**.666****
RPI_Mean	**.717****	**.718****	**.666****	1

Note. Pearson correlation coefficients are reported. All correlations are significant at the **0.01 level (2-tailed)**.
** = $p < .01$

6. Multiple Linear Regression

A multiple linear regression was conducted to assess the influence of *Satisfaction*, *Trust*, and *Repurchase Intention* on *Word of Mouth* (WOM). The model was statistically significant, $F(3, 246) = 128.564$, $p < .001$, with an R^2 of .611, indicating that 61.1% of the variance in WOM can be explained by the three predictors (see Table 13).

Table 14: Regression Coefficients Predicting WOM_Mean

Variable	B	SE	Beta	t	Sig.	95% CI Lower	Upper	Zero-order	Partial	Part	Tolerance	VIF
(Constant)	-0.291	0.306	—	-0.951	0.342	-0.893	0.311	—	—	—	—	—
SAT_Mean	0.405	0.108	0.320	3.739	< .001	0.192	0.618	0.724	0.232	0.149	0.217	4.613
TRUST_Mean	0.180	0.103	0.140	1.754	0.081	-0.022	0.382	0.680	0.111	0.070	0.248	4.028
RPI_Mean	0.495	0.072	0.395	6.863	< .001	0.353	0.637	0.718	0.401	0.273	0.477	2.097

All predictors were entered simultaneously using the enter method. The standardized regression coefficients showed that *Repurchase Intention* ($\beta = .395$, $p < .001$) and *Satisfaction* ($\beta = .320$, $p < .001$) had significant positive effects on WOM, while *Trust* was not statistically significant at the 5% level ($\beta = .140$, $p = .081$) (see Table 14).

6.1. Regression Assumptions

Figures 4 to 6 display the bivariate relationships between each predictor and the dependent variable *Word of Mouth* (WOM). A clear positive linear trend is observed between WOM and both SAT and RPI, with data points closely aligned along the regression lines, indicating strong associations. In contrast, the scatterplot for *Trust* shows a more dispersed pattern, suggesting a weaker and less consistent relationship with WOM. These visualizations support the statistical findings, where Satisfaction and Repurchase Intention were significant predictors, while Trust did not reach statistical significance in the regression model.

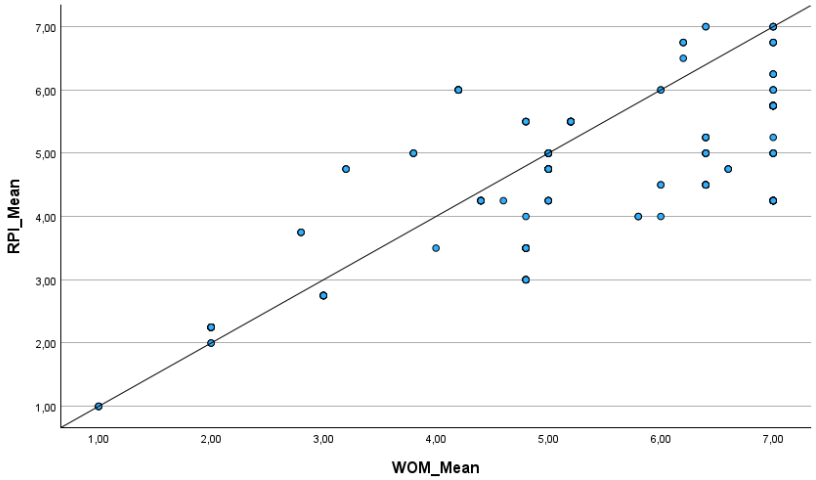

Figure 4: Scatterplot of WOM_Mean and SAT_Mean with regression line

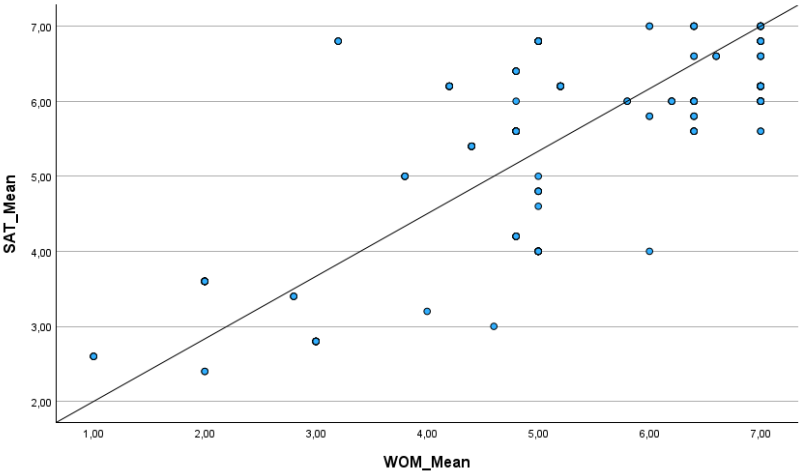

Figure 5: Scatterplot of WOM_Mean and RPI_Mean with regression line

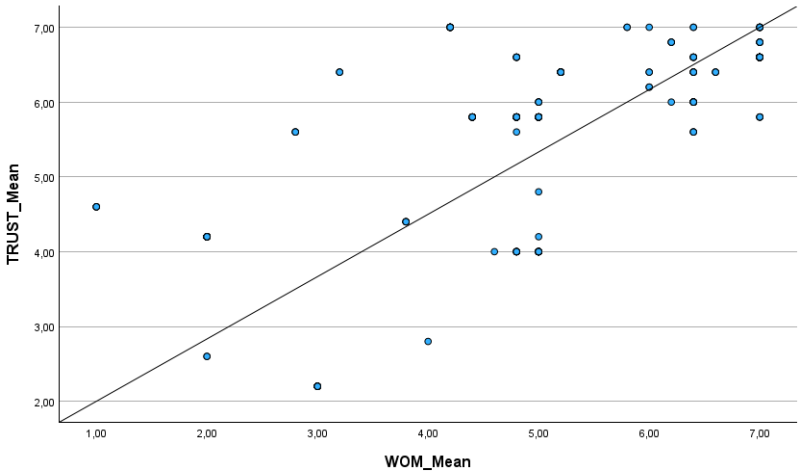

Figure 6: Scatterplot of WOM_Mean and TRUST_Mean with regression line

Homoscedasticity. The scatterplot of standardized predicted values versus standardized residuals (see Figure 7) shows a fairly even spread without a funnel shape, suggesting that the assumption of homoscedasticity is reasonably met.

Multicollinearity. All Variance Inflation Factors (VIFs) were below the critical threshold of 5 (see Table 14): SAT = 4.61, TRUST = 4.03, RPI = 2.10. Tolerance values were above .1. Thus, multicollinearity is not a concern in this model.

Linearity. The scatterplot (Figure 7) supports a linear relationship between the predictors and the outcome variable. There is no strong curvature or non-linear pattern evident.

Normal Distribution of Residuals. The histogram of unstandardized residuals (see Figure 8) appears approximately bell-shaped and symmetric, suggesting normality of residuals. The standardized residuals had a mean of 0.000 and a standard deviation close to 1, which further supports the normality assumption.

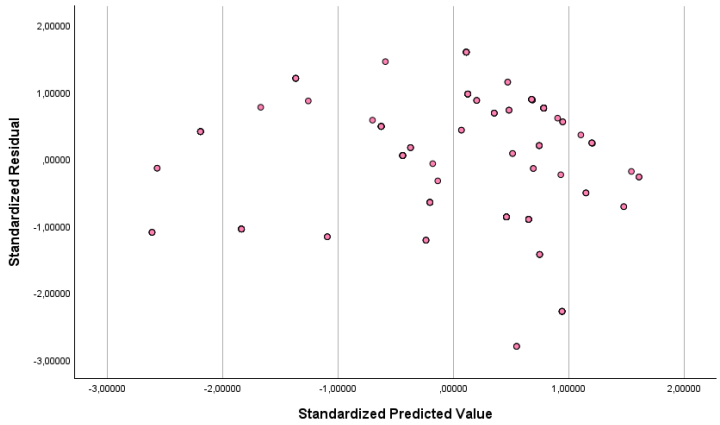

Figure 7: Scatterplot of standardized residuals versus predicted values

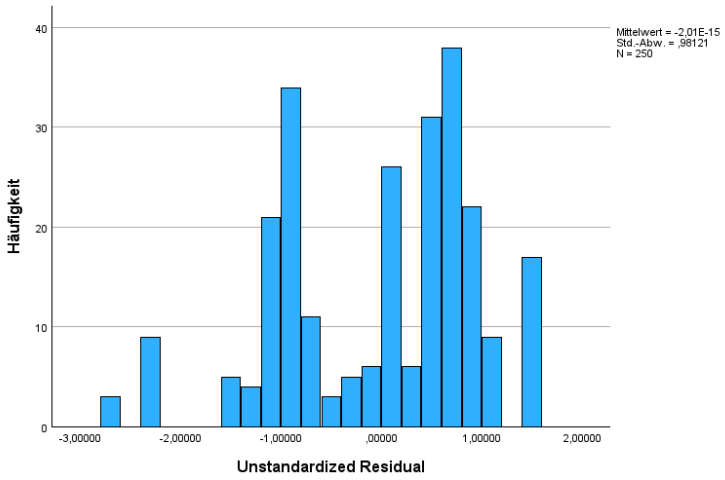

Figure 8: Histogram of unstandardized residuals

7. Results

Table 15: Multiple Regression Results – Predicting Word of Mouth

Predictor	**B**	**SE B**	**Beta**	***p*-value**
Satisfaction (SAT_Mean)	0.405	0.108	0.320	$< .001$
Trust (TRUST_Mean)	0.180	0.103	0.140	.081
Repurchase Intention (RPI_Mean)	0.495	0.072	0.395	$< .001$
Intercept: $B = -0.291$, $SE = 0.306$, $p = .342$				
$R = .781$ $R^2 = .611$ Adjusted $R^2 = .606$ $F(3, 246) = 128.564$, $p < .001$				

Interpretation. The regression model explains 61.1% of the variance in Word of Mouth. Repurchase Intention and Satisfaction are both significant predictors, with Repurchase Intention having the strongest influence ($\beta = .395$). Trust showed a positive but non-significant effect ($p = .081$).

8. Conclusion and Recommendation

This study demonstrates that both customer satisfaction and repurchase intention are strong drivers of positive word of mouth in business markets. Trust also plays a role, but its effect may be mediated or less direct in this context. These findings suggest that B2B firms aiming to increase referral behavior should prioritize improving satisfaction and creating strong incentives or conditions for repurchase.

From a strategic standpoint, marketers should:

- Continuously monitor customer satisfaction metrics.

- Design loyalty programs or service bundles that encourage repeat business.
- Understand that trust may be foundational, but not always a direct trigger of referrals.

9. Limitations and Caveats

Although the dataset was clean and complete, the study has several limitations:

- **Cross-sectional design:** Causal interpretations should be made cautiously.
- **Self-reported measures:** The responses may be subject to social desirability or recall bias.
- **Limited constructs:** Other potential drivers of Word of Mouth, such as emotional attachment or service recovery experience, were not included.
- **Generalisability:** The sample is restricted to past B2B customers, which may not represent all industry contexts.

Future research could include longitudinal data, experimental manipulation of trust, or broader constructs such as brand advocacy or customer delight.