|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Coefficientsa** | | | | | | | | |
| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | 95.0% Confidence Interval for B | |
| B | Std. Error | Beta | Lower Bound | Upper Bound |
| 1 | (Constant) | 282.160 | 991.316 |  | .285 | .776 | -1664.163 | 2228.482 |
| Sales | 1.108 | .056 | 6.136 | 19.681 | .000 | .998 | 1.219 |
| Gross Sales | -.898 | .052 | -5.340 | -17.129 | .000 | -1.001 | -.795 |
| a. Dependent Variable: Profit | | | | | | | | |

Profit = 282.160 + 1.108Sales +-898Gross Sales

t = (.19.681) + (.000) + (.000)

Prob = (.776) + (.000) + (.000)

R = 0.868

R2 = 0.753

Adjusted R Square = 0.753

DW = 2.074

F Stat: 1061.398

Prob: 0.000

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| --- |
|  |

**RELATIONSHIP ANALYSIS**

The constant 282.160 indicate that the dependent variable Profit will remain positive if all the independent variable are held constant.

Furthermore a unit change in sales will cause an increase of 1.108 unit in profit. This positive relationship or influence of sales on Profit is shown to be statistically significant because the probability value of the 0btained t stat (0.00) is greater less than 0.05.

Similarly a unit decrease in Gross sales will lead to decrease of - 898 in Profit, this negative relationship or influence of Gross sales on Profit is shown to be statistically significant given that the probability value of the obtained t stat (0.00) is less than 0.05.

**COEFFICIENT OF CORRELATION**

The coefficient of correlation R with 0.868 indicate a perfect positive association between the dependent and independent variable.

**COEFFICIENT OF DETERMINATION**

The coefficient of determination 0.753 indicate that 75.3% of the variation in the dependent variable have been explained by the Independent variable.

The remaining 24.7% of the variation in the dependent variable that are unaccounted for in this model are due to other variables not considered in this model.

Given the F STAT 1061.398 and the probability value of 0.00, the model can be said to have goodness-of-fit, based on this a null hypothesis

In this regard will fail to hold and is rejected, given that the probability value of 0.00 is less than 0.05.

**DURBIN WATSON**

This isthe measure of autocorrelation or serial correlation, an acceptable autocorrelation value measures using DW should be closed to 2.

DW value that lies between 1 and 2 is acceptable and will indicate the absent of serial correlation, based on this the value of 2.074 which is approximately 2.1 indicate negative autocorrelation.

Thus it is above 2 and lies between 1 and 3. Hence the distribution is free from auto correlation.