Levene's Test Results:

Statistic: 1.9893651956764993, P-value: 0.13690253117827733

The variances across segments are not significantly different (p >= 0.05), indicating the assumption of homogeneity of variances is met.

Bartlett's Test Results:

Statistic: 3.750855311892396, P-value: 0.15328939770299424

The variances across segments are not significantly different (p >= 0.05), indicating the assumption of homogeneity of variances is met.

```
                          OLS Regression Results
==============================================================================
Dep. Variable:             log_sales   R-squared:                       0.000
Model:                           OLS   Adj. R-squared:                 -0.000
Method:                Least Squares   F-statistic:                     0.4556
Date:               Sat, 26 Oct 2024   Prob (F-statistic):              0.634
Time:                       19:17:18   Log-Likelihood:                 -8566.6
No. Observations:               4502   AIC:                          1.714e+04
Df Residuals:                   4499   BIC:                          1.716e+04
Df Model:                          2
Covariance Type:           nonrobust
==============================================================================
                             coef    std err          t      P>|t|      [0.025      0.975]
------------------------------------------------------------------------------
Intercept                  4.1811      0.033    125.868      0.000       4.116       4.246
C(Segment)[T.Corporate]    0.0038      0.055      0.068      0.946      -0.104       0.112
C(Segment)[T.Home Office] -0.0602      0.068     -0.890      0.374      -0.193       0.073
==============================================================================
Omnibus:                     151.820   Durbin-Watson:                   2.003
Prob(Omnibus):                 0.000   Jarque-Bera (JB):               99.003
Skew:                          0.239   Prob(JB):                     3.18e-22
Kurtosis:                      2.453   Cond. No.                         3.32
==============================================================================
```

ANOVA Test Results:

F-statistic: 0.45559371457787307

P-value: 0.6341006489489389

Fail to reject the null hypothesis: There are no significant differences between the segments.