|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CAVOS EXHIBITION (ABUJA SHOW 2019)** |  |  |  |  |
| **ITEMS** | **QTY TAKEN** | **QTY RETURNED** | **QTY SOLD** | **QTY MISSING** |
| **China Moulds** |  |  |  |  |
| Multipurpose moulds | 10 | 5 | 5 | - |
| Cosmos veiner | 10 | 6 | 3 |  |
| Small frame mould | 10 | 3 | 6 | - |
| Heart shape mould | 10 | 7 | 3 | - |
| Small bubble mould | 10 | 10 | - | - |
| Big bubble mould | 10 | 9 | 1 | - |
| Grass mould | 10 | 6 | 4 | - |
| Zip mould big | 10 | 6 | 4 | - |
| Feather mould | 10 | 10 | - | - |
| Crown mould | 10 | 8 | 1 | 1 |
| Tiara mould | 10 | 9 | - | 1 |
| New square mould | 10 | 6 | 4 | - |
| Rope mould | 10 | 8 | 2 | - |
| Rose with leaf mould | 10 | 8 | 2 | - |
| Rose leaf veiner | 10 | 8 | 2 | - |
| Brick mould | 10 | 6 | 4 | - |
| Fludelis mould | 10 | 5 | 5 | - |
| Peony veiner | 9 | 3 | 6 | - |
| Rose petal veiner | 7 | 6 | 1 | - |
| Two lips mould | 10 | 10 | - | - |
| Daisy mould | 5 | 3 | 2 | - |
| Tulip mould | 4 | - | 4 | - |
| Leaf veiner | 6 | 5 | 1 | - |
| Dogwood | 10 | 4 | 6 | - |
|  |  |  |  |  |
| **Cutters** |  |  |  |  |
| Eyelet cutter | 5 | 2 | 3 | - |
| Star cutter | 5 | 5 | - | - |
| Carnation cutter | 10 | 8 | 2 | - |
| Cymbidium orchid petal cutter | 10 | 10 | - | - |
| Holly leaf cutter | 10 | 6 | 4 | - |
| Butterfly orchid petal cutter | 10 | 7 | 3 | - |
| Peony petal cutter | 8 | 2 | 6 | - |
| Tulip petal cutter | 10 | 7 | 2 | 1 |
| Anemone petal cutter | 10 | 9 | 1 | - |
| Poinsettia cutter | 10 | 10 | - | - |
| Rannucullus cutter | 10 | 9 | - | 1 |
| Alstromeria cutter | 10 | 10 | - | - |
| Magnolia cutter | 10 | 7 | 3 | - |
| Waterlily cutter | 10 | 8 | 2 | - |
| Peony leaf cutter | 10 | 10 | - | - |
| David austin rose cutter | 10 | 10 | - | - |
| Corn poppy cutter | 10 | 10 | - | - |
| Rose petal & rose & calyx cutter | 10 | 10 | - | - |
| Rose cutter | 10 | 10 | - | - |
| Cloud cutter | 10 | 7 | 3 | - |
| Daisy mauguerite plunger | 10 | 10 | - | - |
| Rose petal cutter plastic | 10 | 8 | 2 | - |
| Peony petal cutter plastic | 5 | 4 | 1 | - |
|  |  |  |  |  |
| Baking paper | 10 | 10 | - | - |
| China craft knife | 10 | 6 | 4 | - |
| Flower former set | 5 | 4 | 1 | - |
| Musical notes | 10 | 2 | 8 | - |
| Pipping bag with nozzles | 5 | 5 | - | - |
| Snowflake plunger | 10 | 9 | - | - |
| Lily nail | 10 | 10 | - | - |
| 6 pcs flower shaping cups | 5 | 5 | - | - |
| Flower shaping bowls | 5 | 1 | 1 | - |
| Garret frill cutter | 5 | 2 | 2 | 1 |
| Funky alphabet | 5 | 3 | 2 | - |
| Icing comb white | 10 | 1 | 9 | - |
| Icing comb iron | 10 | 1 | 9 | - |
| Sunflower plunger | 10 | 9 | 1 | - |
| Butterfly plunger | 10 | 9 | 1 | - |
| Ball tool | 10 | 5 | 5 | - |
| Palette knife set of 5 | 5 | 1 | 4 | - |
| Spatula small | 10 | 10 | - | - |
| Blue flower board | 5 | 5 | - | - |
| Lollipop stick small | 5 | 3 | 2 | - |
| Lollipop stick big | 5 | - | 5 | - |
| Serated knife | 15 | 8 | 7 | - |
| Plastic dowel rod big | 5 | 4 | 1 | - |
| Spatula big | 10 | 8 | 2 | - |
| Artificial butterfly | 20 | 1 | 19 | - |
| Modelling tool | 10 | 3 | 7 | - |
| Rolling pin big | 10 | - | 10 | - |
| Rolling pin small | 10 | 3 | 7 | - |
| Measuring cups | 10 | - | 8 | 2 |
| Groove board | 7 | - | 7 | - |

**METHOD OF DATA COLLECTION**

The Primary source of data was used in my analysis.

**METHOD OF DATA ANALYSIS**

The Statistical technique used in the analysis of this report is Multiple Linear Regression and Correlation.

**DATA PRESENTATION**

During the 18 weeks (August – December) period of my industrial training in Honeysuckle Cakes, we attended a total of eight (8) cake and sugarcraft exhibitions to market/vend our products/goods. Now the data below is a sample of 30 randomly selected record of collection of the eight (8) exhibitions account of goods (china goods in particular) i.e. total quantity of goods that were taken for the exhibitions, total quantity of goods that returned from the exhibitions, total quantity of goods that were sold in the exhibitions and total quantity of goods that were missing in the exhibitions.

**TABLE 1**: **MY DATA**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Items** | **Total Quantity taken** | **Total Quantity returned** | **Total Quantity sold** | **Total Quantity missing** |
| Measuring cups | 150 | 0 | 148 | 2 |
| Groove board | 100 | 0 | 100 | 0 |
| Animal silhouette | 100 | 40 | 60 | 0 |
| Wedding silhouette | 100 | 40 | 60 | 0 |
| Family silhouette | 100 | 60 | 40 | 0 |
| Easiest rose cutter | 100 | 70 | 30 | 0 |
| Turntable with lock | 50 | 50 | 0 | 0 |
| Palette knife 6" | 100 | 80 | 20 | 0 |
| Palette knife 8" | 100 | 90 | 10 | 0 |
| Palette knife 10" | 100 | 90 | 10 | 0 |
| Rose nails | 500 | 220 | 230 | 50 |
| Dowel rod wooden | 1500 | 550 | 930 | 20 |
| Colourful cupcake case | 360 | 0 | 360 | 0 |
| Siver cupcake case | 360 | 250 | 110 | 0 |
| Number cutter | 50 | 40 | 0 | 10 |
| Alphabet cutter | 50 | 20 | 30 | 0 |
| China foam pad | 100 | 30 | 70 | 0 |
| Cookie cutter | 100 | 70 | 30 | 0 |
| Piping bag by 50 | 200 | 0 | 200 | 0 |
| Texture sheets | 150 | 10 | 140 | 0 |
| Original brushes | 70 | 70 | 0 | 0 |
| Bright gold | 600 | 390 | 210 | 0 |
| Hairnet by 25 | 1000 | 600 | 300 | 10 |
| Hairnet by 100 | 400 | 320 | 80 | 0 |
| Rose balls | 100 | 10 | 70 | 20 |
| Artist brushes | 100 | 20 | 80 | 0 |
| Stamen | 200 | 120 | 80 | 0 |
| China floral tape | 170 | 110 | 60 | 0 |
| Christmas ribbon | 50 | 50 | 0 | 0 |
| Sprinkles big | 60 | 30 | 30 | 0 |

**TABLE 2: SUB DATA**

The data below was gotten from the main data of 30 randomly selected items. Where our dependent variable(Y) represents the quantity of goods sold and our independent variables () represent the quantity of goods taken, returned and missing respectively.

|  |  |  |  |
| --- | --- | --- | --- |
| Total Quantity Taken (Y) | Total Quantity Sold | Total Quantity returned | Total Quantity missing |
| 150 | 148 | 0 | 2 |
| 100 | 100 | 0 | 0 |
| 100 | 60 | 40 | 0 |
| 100 | 60 | 40 | 0 |
| 100 | 40 | 60 | 0 |
| 100 | 30 | 70 | 0 |
| 50 | 0 | 50 | 0 |
| 100 | 20 | 80 | 0 |
| 100 | 10 | 90 | 0 |
| 100 | 10 | 90 | 0 |
| 500 | 230 | 220 | 50 |
| 1500 | 930 | 550 | 20 |
| 360 | 360 | 0 | 0 |
| 360 | 110 | 250 | 0 |
| 50 | 0 | 40 | 10 |
| 50 | 30 | 20 | 0 |
| 100 | 70 | 30 | 0 |
| 100 | 30 | 70 | 0 |
| 200 | 200 | 0 | 0 |
| 150 | 140 | 10 | 0 |
| 70 | 0 | 70 | 0 |
| 600 | 210 | 390 | 0 |
| 1000 | 300 | 600 | 10 |
| 400 | 80 | 320 | 0 |
| 100 | 70 | 10 | 20 |
| 100 | 80 | 20 | 0 |
| 200 | 80 | 120 | 0 |
| 170 | 60 | 110 | 0 |
| 50 | 0 | 50 | 0 |
| 60 | 30 | 30 | 0 |

**OBJECTIVES OF THE ANALYSIS**

1) To check the relationship and the nature of relationship amongst the company’s total quantity of goods sold, total quantity of goods taken, total quantity of goods returned and total quantity of goods missing during the exhibitions.

2) To test for adequacy of my model, if adequate, therefore good to make predictions and future forecast.

3) To test for significance of the parameters.

4) If the above mentioned objectives come out positive, I can therefore recommend a good strategy on how the company should go about their marketing during exhibitions.

**MULTIPLE REGRESSION ANALYSIS ON MY DATA**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SUMMARY OUTPUT |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| *Regression Statistics* |  |  |  |  |  |  |  |  |
| Multiple R | 0.99917604 |  |  |  |  |  |  |  |
| R Square | 0.998352759 |  |  |  |  |  |  |  |
| Adjusted R Square | 0.998162693 |  |  |  |  |  |  |  |
| Standard Error | 13.51209877 |  |  |  |  |  |  |  |
| Observations | 30 |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| ANOVA |  |  |  |  |  |  |  |  |
|  | *Df* | *SS* | *MS* | *F* | *Sig F* |  |  |  |
| Regression | 3 | 2877039.67 | 959013.2 | 5252.656 | 2.7489E-36 |  |  |  |
| Residual | 26 | 4746.997144 | 182.5768 |  |  |  |  |  |
| Total | 29 | 2881786.667 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95.0%* | *Upper 95.0%* |
| Intercept | -3.038197591 | 3.133801207 | -0.96949 | 0.341232 | -9.47981816 | 3.40342298 | -9.4798182 | 3.403422982 |
| X1 | 0.973692782 | 0.018865775 | 51.6116 | 1E-27 | 0.93491363 | 1.01247194 | 0.93491363 | 1.012471937 |
| X2 | 1.081087276 | 0.02079694 | 51.983 | 8.33E-28 | 1.03833855 | 1.123836 | 1.03833855 | 1.123835999 |
| X3 | 0.95335844 | 0.267975935 | 3.557627 | 0.001465 | 0.40252602 | 1.50419086 | 0.40252602 | 1.504190859 |

The multiple regression analysis was ran using MICROSOFT EXCEL.

Below is the regression model from the analysis table above

Where Y represents the total quantity of goods taken.

- represents the total quantity of goods sold.

- represents the total quantity of goods returned.

- represents the total quantity of goods missing.

**Interpretations of my Regression Model**

The interpretation of my regression model are as follows;

**•**For every unit increase in the company’s total quantity of goods taken in the exhibitions, the total quantity of goods sold increases by 0.974 when the total quantity of goods returned and total quantity of goods missing from the exhibitions are kept constant.

**•**For every unit increase in the company’s total quantity of goods taken in the exhibition, the total quantity of goods returned increased by 1.081 when the total quantity of goods sold and total quantity of goods missing from the exhibitions are kept consta nt.

**•**For every unit increase in the total quantity of goods taken in the exhibitions, the total quantity of goods missing increased by 0.954 when the total quantity of goods sold and total quantity of goods returned from the exhibitions are kept constant.

**TEST FOR ADEQUACY**

A model is to be tested to know if it is adequate for predictions.

My hypothesis;

: Model is not adequate

Versus

: Model is adequate

Decision rule: If p-value ˃ -value, accept , otherwise reject.

Conclusion: Since p-value () is approximately equal to 0.000 is less than -value (0.05), there exist enough evidence to reject and accept , there by concluding that my regression model is adequate and hence good for predictions.

**MULTIPLE CORRELATION ANALYSIS**

The table below shows the output of the correlation analysis of my data using MICROSOFT EXCEL.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | *Total Quantity taken (Y)* | *Total Quantity sold (X1)* | *Total Quantity returned (X2)* | *Total Quantity missing (X3)* |
| Total Quantity taken (Y) | 1 |  |  |  |
| Total Quantity sold (X1) | 0.906452115 | 1 |  |  |
| Total Quantity returned (X2) | 0.899504669 | 0.634851941 | 1 |  |
| Total Quantity missing (X3) | 0.437093599 | 0.407513967 | 0.336082 | 1 |

**Interpretations of my Correlation Analysis**

**•**The company’s total quantity of goods sold in the exhibitions has a strong positive correlation with total quantity of goods taken because their correlation coefficient is approximately equal to 0.906.

**•**The company’s total quantity of goods sold in the exhibitions has a strong positive correlation with the total quantity of goods that were returned because their correlation coefficient is approximately equal to 0.635.

**•**The company’s total quantity of goods sold in the exhibitions has a weak positive correlation with the total quantity of goods that were missing because their correlation is approximately equal to 0.408.

**•**The company’s total quantity of goods taken for the exhibitions has a strong positive correlation with total quantity of goods that were returned because their correlation coefficient is approximately equal to 0.9.

**•**The company’s total quantity of goods taken for the exhibitions has a weak positive correlation with the total quantity of goods missing because their correlation coefficient is approximately equal to 0.437.

**•**The company’s total quantity of goods that were returned from the exhibitions has a weak positive correlation with the total quantity of goods because their correlation coefficient is approximately equal to 0.336

**CONCLUSION**

From the analysis carried out in chapter four (4), the company’s total quantity of goods taken during the exhibitions, total quantity of goods sold, total quantity of goods returned and total quantity of goods missing are all significantly related.

The highest/strongest correlation lies between the total quantity of goods taken and the total quantity of goods sold.

**RECCOMENDATION FROM MY ANALYSIS**

In order to boost sales during exhibitions, I hereby recommend that the management of Honeysuckle cakes should ensure that most of these china products are taken for sales and marketing. Also I would advise the company to try as much as possible to be careful with goods during the exhibition, so as to avoid missing or damaged goods.