

Stanislaw Godlewski

11/6/2022

BADM 3802

Daugherty

Billing and Sales Analysis for Wellington Global Marketplace

This is my first project that I coded in SAS. I coded this as an assignment for a class called Data and Text Mining; taught at the University of Connecticut. I was instructed to create two tables consisting of the sum of sales and the billing amount from the fifty products sold within the 51 states that were observed, including the District of Columbia respectively. The observations from these tables were extracted from collected data of the Wellington Global Marketplace. When recently collected data shows a lower amount of billing and sales than predicted, research is done within the company to determine appropriate protocol. As such, my professor instructed the class and I to compute the billing amount of each sale per state in USD, the billing amount of all sales per state in USD and the total quantity of sales per state. These calculations will allow an analyzer to investigate the success of the state. For example, if one particular state had a low quantity of sales and a low sum of billing, these calculations would determine which states had these numbers. Once the states had been identified, business strategies would be developed to increase the number of sales and amount of billing within that state.

Below is the link to the bar graphs and heat maps generated in Tableau after merging the calculated data from a Wellington Global Marketplace inventory spreadsheet with discount and tax rates factored in using SQL and SAS: <https://tinyurl.com/3vvmw9w9>

**Before analyzing the code below; one important formula to be cognizant of is that the billing amount was calculated by:*

The UNIVARIATE Procedure
Variable: Total_Sum_by_State_ID

Moments

N	51	Sum Weights	51
Mean	3804.98039	Sum Observations	194054
Std Deviation	2132.28031	Variance	4546619.34
Skewness	0.91510092	Kurtosis	0.64476002
Uncorrected SS	965702632	Corrected SS	227330967
Coeff Variation	56.0391932	Std Error Mean	298.578966

Basic Statistical Measures

Location		Variability	
Mean	3804.980	Std Deviation	2132
Median	3757.000	Variance	4546619
Mode	2938.000	Range	8804
		Interquartile Range	3038

Tests for Location: Mu0=0

Test	Statistic	p Value
Student's t	t 12.74363	Pr > t <.0001
Sign	M 25.5	Pr >= M <.0001
Signed Rank	S 663	Pr >= S <.0001

Quantiles (Definition 5)

Level	Quantile
100% Max	9692
99%	9692
95%	7857

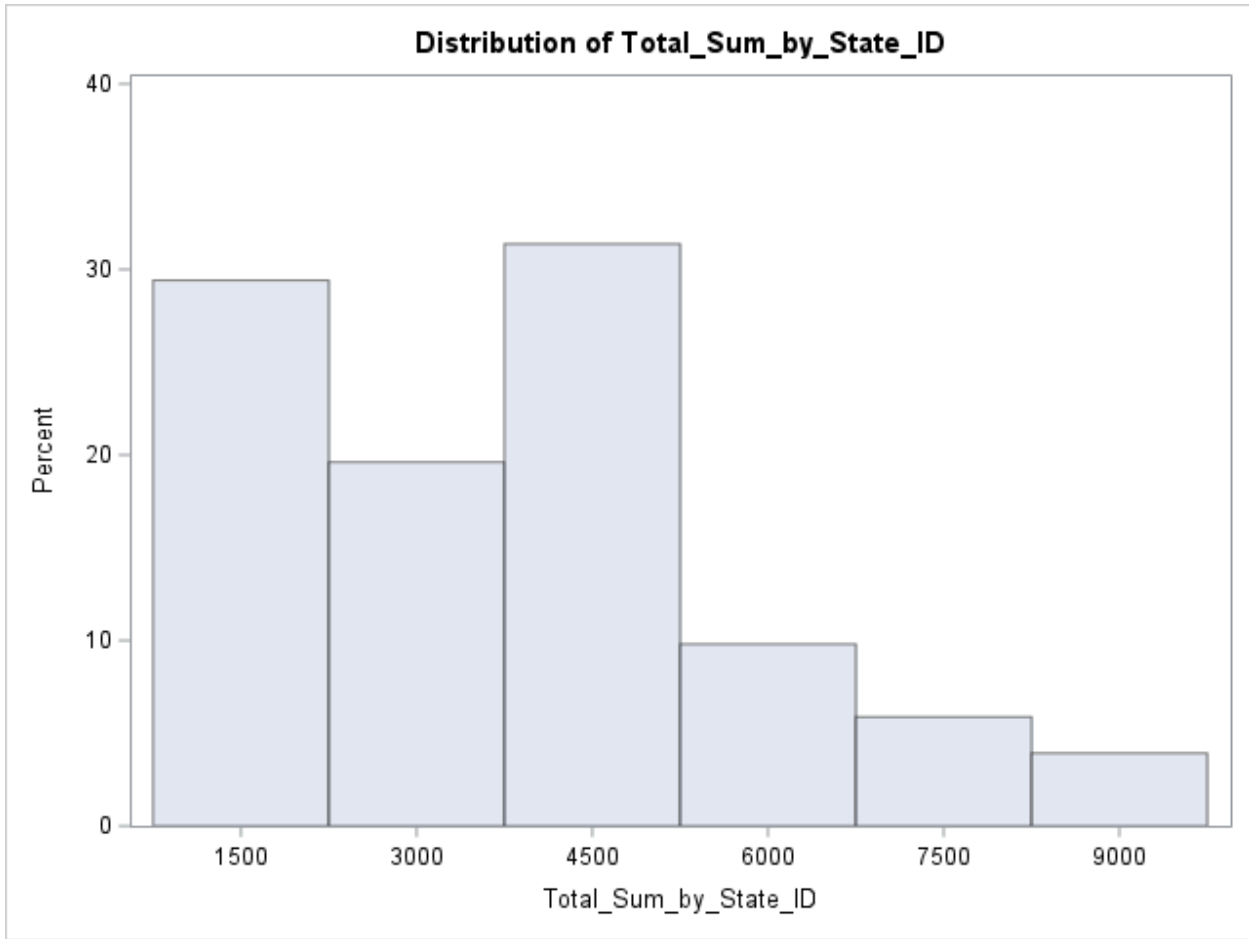
Quantiles (Definition 5)

Level	Quantile
90%	6600
75% Q3	5048
50% Median	3757
25% Q1	2010
10%	1835
5%	931
1%	888
0% Min	888

Extreme Observations

Lowest		Highest	
Value	Obs	Value	Obs
888	43	6874	47
914	35	7722	19
931	41	7857	40
960	3	9573	14
1043	29	9692	22

The UNIVARIATE Procedure



0.91510092

The UNIVARIATE Procedure
Variable: TotalBilling_BY_StateID

Moments

N	51	Sum Weights	51
Mean	522549.112	Sum Observations	26650004.7
Std Deviation	303710.703	Variance	9.22402E10
Skewness	1.18170164	Kurtosis	1.42393311
Uncorrected SS	1.85379E13	Corrected SS	4.61201E12

Moments

Coeff Variation 58.1209872 **Std Error Mean** 42528.0049

Basic Statistical Measures

Location		Variability	
Mean	522549.1	Std Deviation	303711
Median	459393.4	Variance	9.22402E10
Mode	.	Range	1370061
		Interquartile Range	329022

Tests for Location: $\mu_0=0$

Test	Statistic	p Value
Student's t	t 12.28718	Pr > t <.0001
Sign	M 25.5	Pr >= M <.0001
Signed Rank	S 663	Pr >= S <.0001

Quantiles (Definition 5)

Level	Quantile
100% Max	1484000
99%	1484000
95%	1167316
90%	909599
75% Q3	626282
50% Median	459393
25% Q1	297260
10%	201063
5%	127589

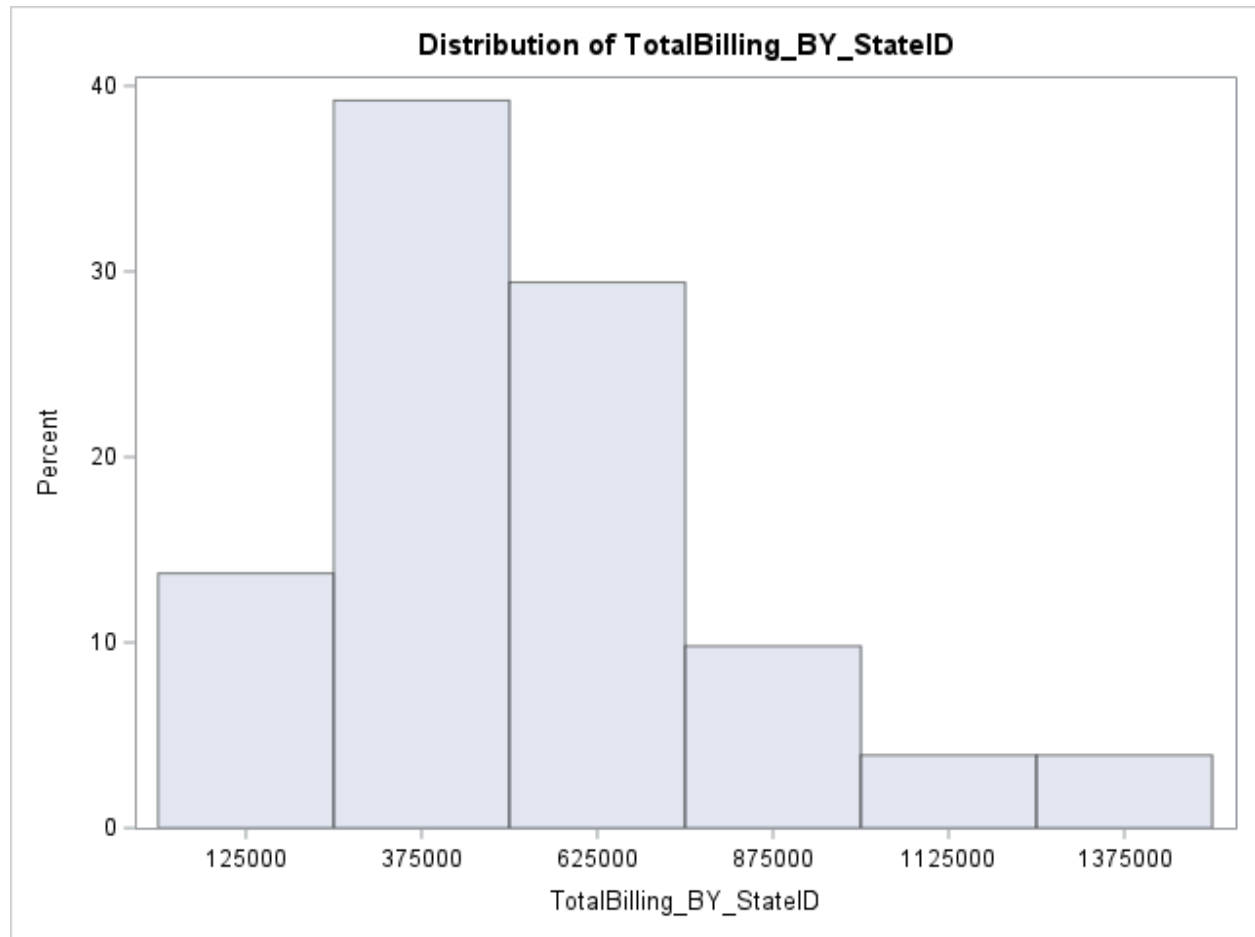
Quantiles (Definition 5)

Level	Quantile
1%	113939
0% Min	113939

Extreme Observations

Lowest		Highest	
Value	Obs	Value	Obs
113939	35	921669	28
126712	43	1124831	19
127589	41	1167316	22
143653	29	1283009	40
166028	20	1484000	14

The UNIVARIATE Procedure



1.18170164

The REG Procedure

Model: MODEL1

Dependent Variable: Total_Sum_by_State_ID

Number of Observations 51

Read

Number of Observations Used 51

Analysis of Variance

Source	D F	Sum of Squares	Mean Square	F Value	Pr > F
Model	1	215817113	215817113	918.46	<.0001
Error	49	11513854	234977		
Corrected Total	50	227330967			

Root MSE 484.74387 R-Square 0.9494
Dependent Mean 3804.98039 Adj R-Sq 0.9483
Coeff Var 12.73972

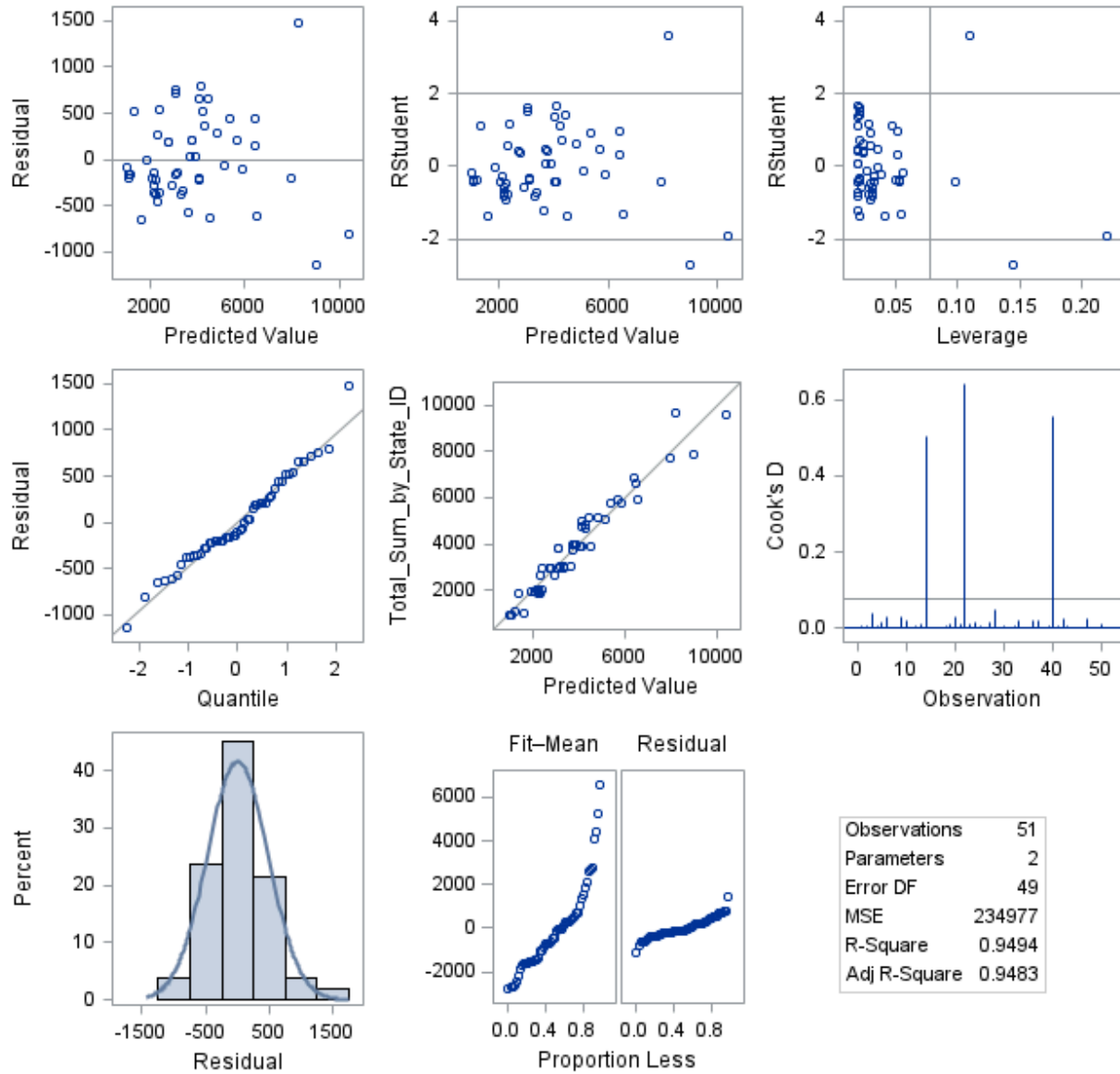
Parameter Estimates

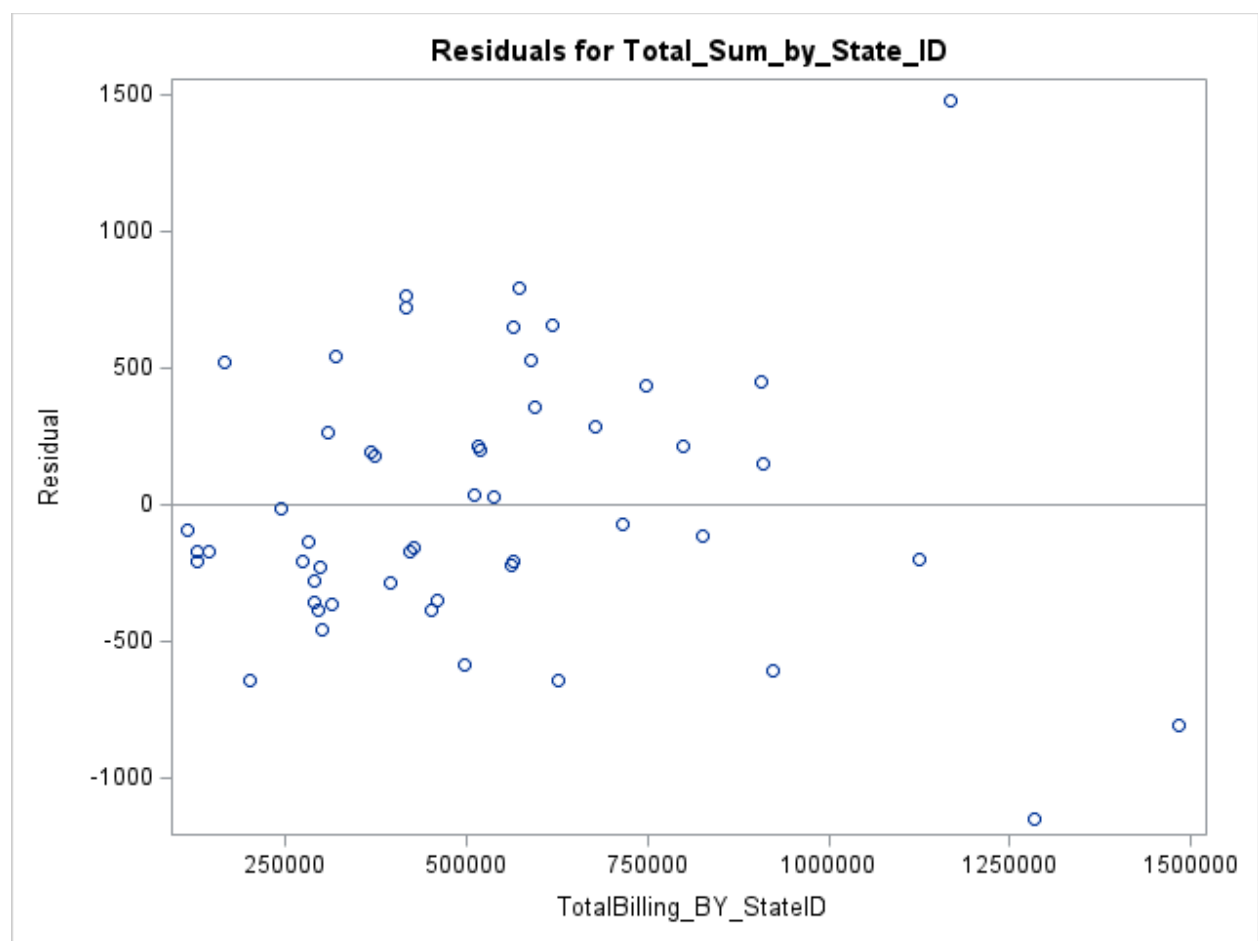
Variable	D F	Parameter Estimate	Standard Error	t Value	Pr > t
Intercept	1	230.40094	136.08584	1.69	0.0968
TotalBilling_BY_StateID	1	0.00684	0.00022572	30.31	<.0001

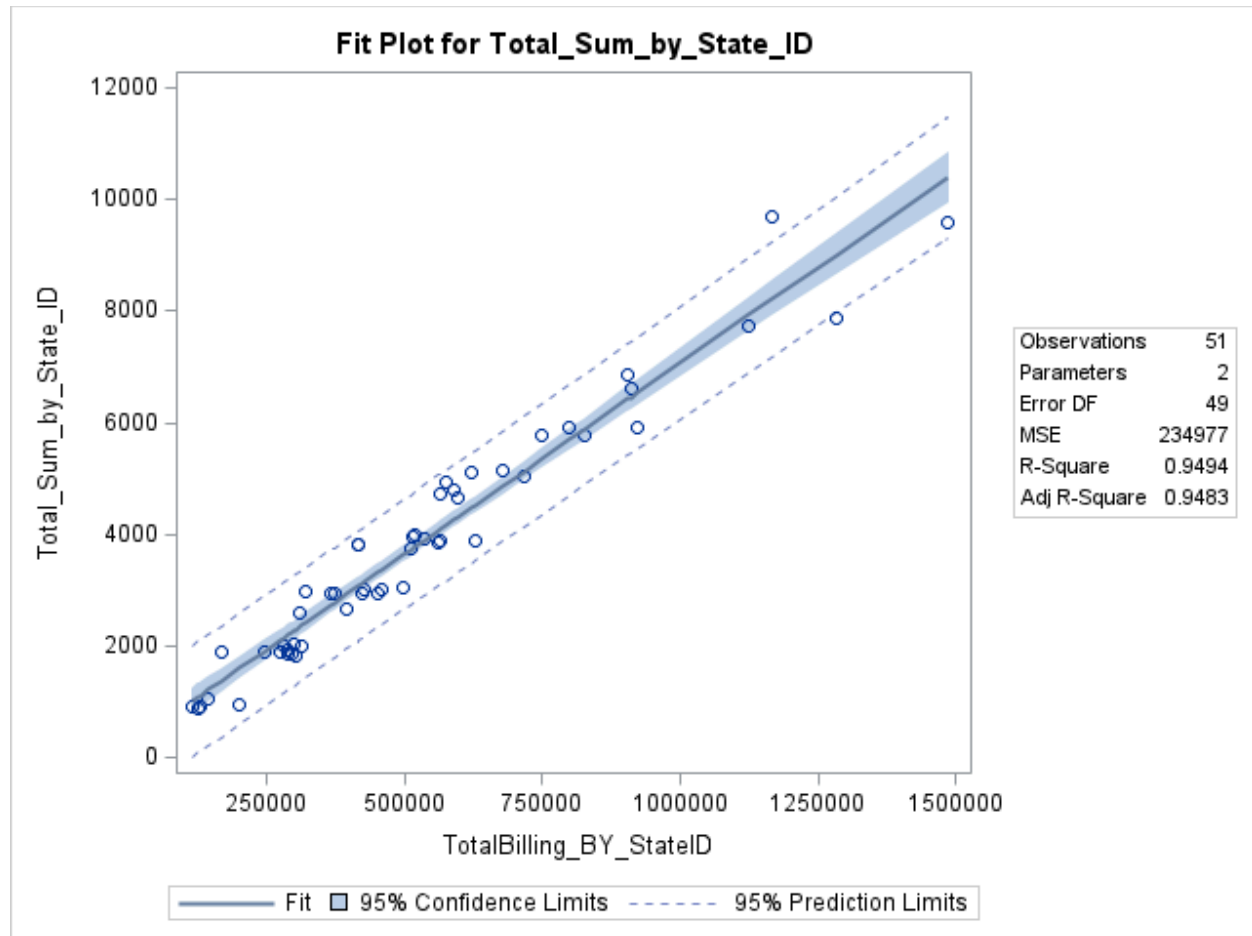
The SAS System

The REG Procedure
Model: MODEL1
Dependent Variable: Total_Sum_by_State_ID

Fit Diagnostics for Total_Sum_by_State_ID







```
proc import datafile = '\\msfs-03.grove.ad.uconn.edu\home\stg19003\Desktop\Wellington Global
Marketplace.xlsx'
```

```
  out = Products
```

```
  dbms = xlsx
```

```
  replace
```

```
  ;
```

```
  sheet = "Products";
```

```
run;
```

```
proc import datafile = '\\msfs-03.grove.ad.uconn.edu\home\stg19003\Desktop\Wellington
Global Marketplace.xlsx'
```

```
  out = Customers
```

```
  dbms = xlsx
```

```
replace
;
sheet = "Customers";
run;
```

```
proc import datafile = "\\msfs-03.grove.ad.uconn.edu\home\stg19003\Desktop\Wellington
Global Marketplace.xlsx'
out = Sales_Tax_By_State
dbms = xlsx
replace
;
sheet = "Sales_Tax_By_State";
run;
```

```
proc import datafile = "\\msfs-03.grove.ad.uconn.edu\home\stg19003\Desktop\Wellington
Global Marketplace.xlsx'
out = Sales_2014
dbms = xlsx
replace
;
sheet = "Sales_2014";
run;
```

```
proc import datafile = "\\msfs-03.grove.ad.uconn.edu\home\stg19003\Desktop\Wellington
Global Marketplace.xlsx'
out = Departments
dbms = xlsx
replace
;
sheet = "Departments";
run;
```

```
proc import datafile = "\\msfs-03.grove.ad.uconn.edu\home\stg19003\Desktop\Wellington
Global Marketplace.xlsx'
out = Employee_Master
dbms = xlsx
replace
;
sheet = "Employee_Master";
run;
```

```
proc sql;
create table Work.DStates as
Select A.STID, A.State, A.State_CD, A.State_Tax_Rate,
```

```
B.Customer_Name,B.Cust_ID, B.State
From Work.Sales_tax_by_state A
Join Work.Customers B
On A.STID = B.State
;
quit;
```

```
proc sql;
create table Work.DProducts as
Select A.sale_id, A.product_id, A.date, A.discount,A.Quantity, A.Customer_ID,
B.ProdName,B.CostIn, B.PriceOut, B.eff, B.exp, B.prodID
From Work.Sales_2014 A
Join Work.Products B
On B.prodID = A.product_id
And A.date >= B.eff
And A.date <= B.exp
;
quit;
```

```
proc sql;
create table Work.CALL as
Select A.STID, A.State, A.State_CD, A.State_Tax_Rate,A.Customer_Name,A.Cust_ID,A.State,
B.sale_id, B.product_id, B.date, B.discount,B.Quantity, B.Customer_ID,
B.ProdName,B.CostIn, B.PriceOut, B.eff, B.exp, B.prodID
From Work.DStates A
Join Work.DProducts B
On A.Cust_ID = B.Customer_ID
;
quit;
```

```
Proc sql;

create table DoltForState_In_Alabama as

SELECT *
```

From Work.CALL

Where STID = 1;

;

quit;

Proc sql;

create table DoltForState_In_Alaska as

SELECT *

From Work.CALL

Where STID = 2;

;

Quit;

Proc sql;

create table DoltForState_In_Arizona as

SELECT *

From Work.CALL

Where STID = 3;

;

quit;

Proc sql;

create table DoltForState_In_Arkansas as

SELECT *

From Work.CALL

Where STID = 4;

;

Quit;

Proc sql;

create table DoltForState_In_California as

SELECT *

From Work.CALL

Where STID = 5;

;

quit;

Proc sql;

create table DoltForState_In_Colorado as

SELECT *

From Work.CALL

Where STID = 6;

;

Quit;

Proc sql;

create table DoltForState_In_Connecticut as

SELECT *

From Work.CALL

Where STID = 7;

;

Quit;

Proc sql;

create table DoltForState_In_Delaware as

SELECT *

From Work.CALL

Where STID = 8;

;

Quit;

Proc sql;

create table DoltForState_In_Florida as

SELECT *

From Work.CALL

Where STID = 9;

;

Quit;

Proc sql;

create table DoltForState_In_Georgia as

SELECT *

From Work.CALL

Where STID = 10;

;

Quit;

Proc sql;

create table DoltForState_In_Hawaii as

SELECT *

From Work.CALL

Where STID = 11;

;

quit;

Proc sql;


```
create table DoltForState_In_Idaho as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 12;
```

```
;
```

```
quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Illinois as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 13;
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Indiana as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 14;
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Iowa as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 15;
```

```
;
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Kansas as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 16;
```

```
;
quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Kentucky as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 17;
```

```
;
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Louisiana as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 18;
```

```
;
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Maine as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 19;
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Maryland as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 20;
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Massachusetts as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 21;
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Michigan as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 22;
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Minnesota as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 23;
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Mississippi as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 24;
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Missouri as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 25;
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Montana as
```

```
SELECT *
```

From Work.CALL

Where STID = 26;

;

Quit;

Proc sql;

create table DoltForState_In_Nebraska as

SELECT *

From Work.CALL

Where STID = 27;

;

Quit;

Proc sql;

create table DoltForState_In_Nevada as

SELECT *

From Work.CALL

Where STID = 28;

;

Quit;

Proc sql;

create table DoltForState_In_New_Hampshire as

SELECT *

From Work.CALL

Where STID = 29;

;

Quit;

Proc sql;

create table DoltForState_In_New_Jersey as

SELECT *

From Work.CALL

Where STID = 30;

;

Quit;

Proc sql;

create table DoltForState_In_New_Mexico as

SELECT *

From Work.CALL

Where STID = 31;

;

Quit;

Proc sql;

create table DoltForState_In_New_York as

SELECT *

From Work.CALL

Where STID = 32;

;

Quit;

Proc sql;

create table DoltForState_In_North_Carolina as

SELECT *

From Work.CALL

```
Where STID = 33;  
;  
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_North_Dakota as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 34;  
;  
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Ohio as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 35;  
;  
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Oklahoma as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 36;  
;  
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Oregon as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 37;
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Pennsylvania as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 38;
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Rhode_Island as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 39;
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_South_Carolina as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 40;
```

```
;
```

```
Quit;
```


Proc sql;

create table DoltForState_In_South_Dakota as

SELECT *

From Work.CALL

Where STID = 41;

;

Quit;

Proc sql;

create table DoltForState_In_Tennessee as

SELECT *

From Work.CALL

Where STID = 42;

;

Quit;

Proc sql;

create table DoltForState_In_Texas as

SELECT *

From Work.CALL

Where STID = 43;

;

Quit;

Proc sql;

create table DoltForState_In_Utah as

SELECT *

From Work.CALL

Where STID = 44;

;

Quit;

Proc sql;

create table DoltForState_In_Vermont as

SELECT *

From Work.CALL

Where STID = 45;

;

Quit;

Proc sql;

create table DoltForState_In_Virginia as

SELECT *

From Work.CALL

Where STID = 46;

;

Quit;

Proc sql;

create table DoltForState_In_Washington as

SELECT *

From Work.CALL

Where STID = 47;

;

Quit;

Proc sql;

```
create table DoltForState_In_West_Virginia as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 48;
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Wisconsin as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 49;
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_Wyoming as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 50;
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table DoltForState_In_DC as
```

```
SELECT *
```

```
From Work.CALL
```

```
Where STID = 51;
```

```
;  
quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Alabama as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Alabama
```

```
;  
quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Alaska as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Alaska
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Arizona as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Arizona
```

```
;  
quit;
```

Proc sql;

create table TotalSales_In_Arkansas as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Arkansas

;

Quit;

Proc sql;

create table TotalSales_In_California as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_California

;

quit;

Proc sql;

create table TotalSales_In_Colorado as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Colorado

;

Quit;

Proc sql;

create table TotalSales_In_Connecticut as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Connecticut

;
Quit;

Proc sql;

create table TotalSales_In_Delaware as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Delaware

;
Quit;

Proc sql;

create table TotalSales_In_Florida as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Florida

;
Quit;

Proc sql;

create table TotalSales_In_Georgia as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Georgia

;
Quit;

Proc sql;

```
create table TotalSales_In_Hawaii as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Hawaii

;
quit;
```

```
Proc sql;

create table TotalSales_In_Idaho as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Idaho

;
quit;
```

```
Proc sql;

create table TotalSales_In_Illinois as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Illinois

;
Quit;
```

```
Proc sql;

create table TotalSales_In_Indiana as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Indiana
```

```
;
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Iowa as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Iowa
```

```
;
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Kansas as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work. DoltForState_In_Kansas
```

```
;
quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Kentucky as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Kentucky
```

```
;
Quit;
```

```
Proc sql;
```



```
create table TotalSales_In_Louisiana as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Louisiana

;
Quit;
```

```
Proc sql;

create table TotalSales_In_Maine as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Maine

;
Quit;
```

```
Proc sql;

create table TotalSales_In_Maryland as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Maryland

;
Quit;
```

```
Proc sql;

create table TotalSales_In_Massachusetts as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Massachusetts
```

```
;
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Michigan as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Michigan
```

```
;
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Minnesota as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Minnesota
```

```
;
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Mississippi as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Mississippi
```

```
;
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Missouri as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work. DoltForState_In_Missouri
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Montana as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Montana
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Nebraska as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work. DoltForState_In_Nebraska
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Nevada as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work. DoltForState_In_Nevada
```

```
;
```

```
Quit;
```

Proc sql;

create table TotalSales_In_New_Hampshire as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_New_Hampshire

;

Quit;

Proc sql;

create table TotalSales_In_New_Jersey as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_New_Jersey

;

Quit;

Proc sql;

create table TotalSales_In_New_Mexico as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_New_Mexico

;

Quit;

Proc sql;

create table TotalSales_In_New_York as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_New_York

```
;  
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_North_Carolina as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_North_Carolina
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_North_Dakota as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_North_Dakota
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Ohio as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Ohio
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Oklahoma as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Oklahoma
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Oregon as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Oregon
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Pennsylvania as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Pennsylvania
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_Rhode_Island as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_Rhode_Island
```

```
;
```

Quit;

Proc sql;

create table TotalSales_In_South_Carolina as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_South_Carolina

;

Quit;

Proc sql;

create table TotalSales_In_South_Dakota as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_South_Dakota

;

Quit;

Proc sql;

create table TotalSales_In_Tennessee as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Tennessee

;

Quit;

Proc sql;

create table TotalSales_In_Texas as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Texas

;
Quit;

Proc sql;

create table TotalSales_In_Utah as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Utah

;
Quit;

Proc sql;

create table TotalSales_In_Vermont as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Vermont

;
Quit;

Proc sql;

create table TotalSales_In_Virginia as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Virginia

;
Quit;

Proc sql;

create table TotalSales_In_Washington as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Washington

;

Quit;

Proc sql;

create table TotalSales_In_West_Virginia as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_West_Virginia

;

Quit;

Proc sql;

create table TotalSales_In_Wisconsin as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work. DoltForState_In_Wisconsin

;

Quit;

Proc sql;

create table TotalSales_In_Wyoming as

SELECT sum(quantity) as Total_Sum_by_State_ID

From Work.DoltForState_In_Wyoming

```
;
Quit;
```

```
Proc sql;
```

```
create table TotalSales_In_DC as
```

```
SELECT sum(quantity) as Total_Sum_by_State_ID
```

```
From Work.DoltForState_In_DC
```

```
;
quit;
```

```
data Work.Sum1_of_Sales_by_State_ID;
```

```
set TotalSales_In_Alabama TotalSales_In_Alaska TotalSales_In_Arizona
TotalSales_In_Arkansas TotalSales_In_California TotalSales_In_Colorado
TotalSales_In_Connecticut TotalSales_In_Delaware TotalSales_In_Florida
TotalSales_In_Georgia TotalSales_In_Hawaii TotalSales_In_Idaho TotalSales_In_Illinois
TotalSales_In_Indiana TotalSales_In_Iowa TotalSales_In_Kansas TotalSales_In_Kentucky
TotalSales_In_Louisiana TotalSales_In_Maine TotalSales_In_Maryland
TotalSales_In_Massachusetts TotalSales_In_Michigan TotalSales_In_Minnesota
TotalSales_In_Mississippi TotalSales_In_Missouri TotalSales_In_Montana
TotalSales_In_Nebraska TotalSales_In_Nevada TotalSales_In_New_Hampshire
TotalSales_In_New_Jersey TotalSales_In_New_Mexico TotalSales_In_New_York
TotalSales_In_North_Carolina TotalSales_In_North_Dakota TotalSales_In_Ohio
TotalSales_In_Oklahoma TotalSales_In_Oregon TotalSales_In_Pennsylvania
TotalSales_In_Rhode_Island TotalSales_In_South_Carolina TotalSales_In_South_Dakota
TotalSales_In_Tennessee TotalSales_In_Texas TotalSales_In_Utah TotalSales_In_Vermont
TotalSales_In_Virginia TotalSales_In_Washington TotalSales_In_West_Virginia
TotalSales_In_Wisconsin TotalSales_In_Wyoming TotalSales_In_DC;
run;
```

```
Proc sql;
```

```
create table Billing_In_Alabama as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Alabama
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Alabama as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Alabama
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Alaska as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Alaska
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Alaska as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Alaska
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Arizona as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Arizona
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Arizona as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Arizona
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Arkansas as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate) FROM  
DoltForState_In_Arkansas
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Arkansas as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Arkansas
```

```
;
```

```
Quit;
```

Proc sql;

create table Billing_In_California as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate) FROM
DoltForState_In_California

;

Quit;

Proc sql;

create table TotalBilling_In_California as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_California

;

Quit;

Proc sql;

create table Billing_In_Colorado as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate) FROM
DoltForState_In_Colorado

;

Quit;

Proc sql;

create table TotalBilling_In_Colorado as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_Colorado

```
;  
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Connecticut as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate) FROM  
DoltForState_In_Connecticut
```

```
;  
Quit;  
Proc sql;
```

```
create table TotalBilling_In_Connecticut as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Connecticut
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Delaware as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate) FROM  
DoltForState_In_Delaware
```

```
;  
Quit;  
Proc sql;
```

```
create table TotalBilling_In_Delaware as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Delaware
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Florida as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)  
FROM DoltForState_In_Florida
```

```
;  
Quit;  
Proc sql;
```

```
create table TotalBilling_In_Florida as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Florida
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Georgia as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)  
FROM DoltForState_In_Georgia
```

```
;  
Quit;  
Proc sql;
```

```
create table TotalBilling_In_Georgia as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

From Work.Billing_In_Georgia

;
Quit;

Proc sql;

create table Billing_In_Hawaii as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Hawaii

;
Quit;
Proc sql;

create table TotalBilling_In_Hawaii as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_Hawaii

;
Quit;

Proc sql;

create table Billing_In_Idaho as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Idaho

;
Quit;
Proc sql;

create table TotalBilling_In_Idaho as


```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Idaho
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Illinois as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Illinois
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Illinois as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Illinois
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Indiana as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Indiana
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Indiana as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Indiana
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Iowa as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Iowa
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Iowa as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Iowa
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Kansas as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Kansas
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Kansas as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Kansas
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Kentucky as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Kentucky
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Kentucky as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Kentucky
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Louisiana as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Louisiana
```

```
;
```

```
Quit;
```

Proc sql;

create table TotalBilling_In_Louisiana as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_Louisiana

;

Quit;

Proc sql;

create table Billing_In_Maine as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)

FROM DoltForState_In_Maine

;

Quit;

Proc sql;

create table TotalBilling_In_Maine as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_Maine

;

Quit;

Proc sql;

create table Billing_In_Maryland as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)

FROM DoltForState_In_Maryland

```
;
Quit;
Proc sql;
```

```
create table TotalBilling_In_Maryland as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Maryland
```

```
;
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Massachusetts as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Massachusetts
```

```
;
Quit;
Proc sql;
```

```
create table TotalBilling_In_Massachusetts as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Massachusetts
```

```
;
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Michigan as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Michigan
```

```
;
Quit;
Proc sql;
```

```
create table TotalBilling_In_Michigan as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Michigan
```

```
;
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Minnesota as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Minnesota
```

```
;
Quit;
Proc sql;
```

```
create table TotalBilling_In_Minnesota as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Minnesota
```

```
;
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Mississippi as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Mississippi
```

```
;  
Quit;  
Proc sql;
```

```
create table TotalBilling_In_Mississippi as  
  
SELECT sum(_TEMA001) as TotalBilling_BY_StateID  
  
From Work.Billing_In_Mississippi
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Missouri as  
  
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)  
FROM DoltForState_In_Missouri
```

```
;  
Quit;  
Proc sql;
```

```
create table TotalBilling_In_Missouri as  
  
SELECT sum(_TEMA001) as TotalBilling_BY_StateID  
  
From Work.Billing_In_Missouri
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Montana as  
  
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Montana
```

```
;  
Quit;  
Proc sql;
```

```
create table TotalBilling_In_Montana as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Montana
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Nebraska as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)  
FROM DoltForState_In_Nebraska
```

```
;  
Quit;  
Proc sql;
```

```
create table TotalBilling_In_Nebraska as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Nebraska
```

```
;  
Quit;
```

```
Proc sql;
```


create table Billing_In_Nevada as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Nevada

;

Quit;

Proc sql;

create table TotalBilling_In_Nevada as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_Nevada

;

Quit;

Proc sql;

create table Billing_In_New_Hampshire as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_New_Hampshire

;

Quit;

Proc sql;

create table TotalBilling_In_New_Hampshire as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_New_Hampshire

;

Quit;

Proc sql;

create table Billing_In_New_Jersey as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_New_Jersey

;

Quit;

Proc sql;

create table TotalBilling_In_New_Jersey as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_New_Jersey

;

Quit;

Proc sql;

create table Billing_In_New_Mexico as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_New_Mexico

;

Quit;

Proc sql;

create table TotalBilling_In_New_Mexico as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_New_Mexico

;

Quit;

Proc sql;

```
create table Billing_In_New_York as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)  
FROM DoltForState_In_New_York
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_New_York as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_New_York
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table Billing_In_North_Carolina as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)  
FROM DoltForState_In_North_Carolina
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_North_Carolina as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_North_Carolina
```

```
;
```

```
Quit;
```

Proc sql;

create table Billing_In_North_Dakota as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_North_Dakota

;

Quit;

Proc sql;

create table TotalBilling_In_North_Dakota as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_North_Dakota

;

Quit;

Proc sql;

create table Billing_In_Ohio as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Ohio

;

Quit;

Proc sql;

create table TotalBilling_In_Ohio as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_Ohio

;

Quit;

Proc sql;

create table Billing_In_Oklahoma as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Oklahoma

;

Quit;

Proc sql;

create table TotalBilling_In_Oklahoma as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_Oklahoma

;

Quit;

Proc sql;

create table Billing_In_Oregon as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Oregon

;

Quit;

Proc sql;

create table TotalBilling_In_Oregon as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_Oregon

;

Quit;

Proc sql;

create table Billing_In_Pennsylvania as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Pennsylvania

;

Quit;

Proc sql;

create table TotalBilling_In_Pennsylvania as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_Pennsylvania

;

Quit;

Proc sql;

create table Billing_In_Rhode_Island as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Rhode_Island

;

Quit;

Proc sql;

create table TotalBilling_In_Rhode_Island as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_Rhode_Island

;

Quit;

Proc sql;

create table Billing_In_South_Carolina as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_South_Carolina

;

Quit;

Proc sql;

create table TotalBilling_In_South_Carolina as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_South_Carolina

;

Quit;

Proc sql;

create table Billing_In_South_Dakota as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_South_Dakota

;

Quit;

Proc sql;

create table TotalBilling_In_South_Dakota as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Billing_In_South_Dakota

```
;  
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Tennessee as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)  
FROM DoltForState_In_Tennessee
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Tennessee as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Tennessee
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Texas as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)  
FROM DoltForState_In_Texas
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Texas as
```



```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Texas
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Utah as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Utah
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Utah as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Utah
```

```
;
```

```
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Vermont as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Vermont
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Vermont as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Vermont
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Virginia as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Virginia
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Virginia as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Virginia
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table Billing_In_Washington as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_Washington
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_Washington as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_Washington
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table Billing_In_West_Virginia as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)  
FROM DoltForState_In_West_Virginia
```

```
;  
Quit;
```

```
Proc sql;
```

```
create table TotalBilling_In_West_Virginia as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_West_Virginia
```

```
;  
Quit;
```

Proc sql;

create table Billing_In_Wisconsin as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Wisconsin

;

Quit;

Proc sql;

create table TotalBilling_In_Wisconsin as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_Wisconsin

;

Quit;

Proc sql;

create table Billing_In_Wyoming as

SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
FROM DoltForState_In_Wyoming

;

Quit;

Proc sql;

create table TotalBilling_In_Wyoming as

SELECT sum(_TEMA001) as TotalBilling_BY_StateID

From Work.Billing_In_Wyoming

```
;  
Quit;
```

```
Proc sql;
```

```
create table Billing_In_DC as
```

```
SELECT PriceOut*quantity * (1-discount) * (1-state_tax_rate)
```

```
FROM DoltForState_In_DC
```

```
;  
Quit;  
Proc sql;
```

```
create table TotalBilling_In_DC as
```

```
SELECT sum(_TEMA001) as TotalBilling_BY_StateID
```

```
From Work.Billing_In_DC
```

```
;  
Quit;
```

```
data Work.S_of_Billing_by_State_ID;
```

```
set TotalBilling_In_Alabama TotalBilling_In_Alaska TotalBilling_In_Arizona  
TotalBilling_In_Arkansas TotalBilling_In_California TotalBilling_In_Colorado  
TotalBilling_In_Connecticut TotalBilling_In_Delaware TotalBilling_In_Florida  
TotalBilling_In_Georgia TotalBilling_In_Hawaii TotalBilling_In_Idaho TotalBilling_In_Illinois  
TotalBilling_In_Indiana TotalBilling_In_Iowa TotalBilling_In_Kansas TotalBilling_In_Kentucky  
TotalBilling_In_Louisiana TotalBilling_In_Maine TotalBilling_In_Maryland
```

```

TotalBilling_In_Massachusetts TotalBilling_In_Michigan TotalBilling_In_Minnesota
TotalBilling_In_Mississippi TotalBilling_In_Missouri TotalBilling_In_Montana
TotalBilling_In_Nebraska TotalBilling_In_Nevada TotalBilling_In_New_Hampshire
TotalBilling_In_New_Jersey TotalBilling_In_New_Mexico TotalBilling_In_New_York
TotalBilling_In_North_Carolina TotalBilling_In_North_Dakota TotalBilling_In_Ohio
TotalBilling_In_Oklahoma TotalBilling_In_Oregon TotalBilling_In_Pennsylvania
TotalBilling_In_Rhode_Island TotalBilling_In_South_Carolina TotalBilling_In_South_Dakota
TotalBilling_In_Tennessee TotalBilling_In_Texas TotalBilling_In_Utah TotalBilling_In_Vermont
TotalBilling_In_Virginia TotalBilling_In_Washington TotalBilling_In_West_Virginia
TotalBilling_In_Wisconsin TotalBilling_In_Wyoming TotalBilling_In_DC;
run;

```

```

proc import datafile = '\\msfs-03.grove.ad.uconn.edu\home\stg19003\Desktop\States.xlsx'
  out = Sheet1
  dbms = xlsx
  replace
  ;
  sheet = "Sheet1";
run;

```

```

proc import datafile = '\\msfs-03.grove.ad.uconn.edu\home\stg19003\Desktop\States.xlsx'
  out = Sheet1
  dbms = xlsx
  replace
  ;
  sheet = "Sheet1";
run;

```

```

proc import datafile =
'\\msfs-03.grove.ad.uconn.edu\home\stg19003\Desktop\TheStateIDs.xlsx'
  out = IDs
  dbms = xlsx
  replace
  ;
  sheet = "IDs";
run;

```

```

data Work.Billing_Sum_by_State_In_Dollars;

```

```

merge Work.S_of_Billing_by_State_ID Work.Sheet1 Work.IDs;
run;

```

```

data Work.Quantity_of_Sales_by_State;

```

```

merge Work.Sum1_of_Sales_by_State_ID Work.Sheet1 Work.IDs;

```

```
run;
```

```
proc univariate data=Work.Quantity_of_Sales_by_State;  
  var Total_Sum_by_State_ID;  
  histogram;  
run;
```

```
proc univariate data=Work.Billing_Sum_by_State_In_Dollars;  
  var TotalBilling_BY_StateID;  
  histogram;  
run;
```

```
data Work.Linear_Regression;
```

```
merge Work.Billing_Sum_by_State_In_Dollars Work.Quantity_of_Sales_by_State;  
run;
```

```
proc reg data=Work.Linear_Regression outest=Work.reg1;  
  model Total_Sum_by_State_ID = TotalBilling_BY_StateID ;  
  
quit;
```

Here is the table pasted from SAS displaying the total sales:

Total_Sum_by_State_ID	Alphabetical Order	STID
2653	Alabama	1

2938	Alaska	2
960	Arizona	3
4658	Arkansas	4
5782	California	5
4944	Colorado	6
2935	Connecticut	7
5764	Delaware	8
3834	Florida	9
2962	Georgia	10
3889	Hawaii	11
1929	Idaho	12
2012	Illinois	13
9573	Indiana	14
5048	Iowa	15
6600	Kansas	16
1904	Kentucky	17
2608	Louisiana	18
7722	Maine	19
1885	Maryland	20

1855	Massachusetts	21
9692	Michigan	22
1853	Minnesota	23
1835	Mississippi	24
5912	Missouri	25
2938	Montana	26
3047	Nebraska	27
5926	Nevada	28
1043	New Hampshire	29
2036	New Jersey	30
3936	New Mexico	31
3024	New York	32
4740	North Carolina	33
2010	North Dakota	34
914	Ohio	35
5128	Oklahoma	36
387	Oregon	37

3967	Pennsylvania	38
5147	Rhode Island	39
7857	South Carolina	40

931	South Dakota	41
3804	Tennessee	42
888	Texas	43
3757	Utah	44
3859	Vermont	45
3979	Virginia	46
6874	Washington	47
2997	West Virginia	48
2953	Wisconsin	49
4788	Wyoming	50
1894	DC	51

Here is the table pasted from SAS displaying the total billings:

TotalBilling_BY_StateID	Alphabetical Order	State_ID
395397.5	Alabama	1
452305.8	Alaska	2
201062.87	Arizona	3
595460.32	Arkansas	4
747533.69	California	5
573111.69	Colorado	6
367397.02	Connecticut	7
825402.24	Delaware	8
415251.3	Florida	9
319492.53	Georgia	10
564801.66	Hawaii	11
289461.72	Idaho	12
313490.51	Illinois	13
1483999.59	Indiana	14
715124.2	Iowa	15
909599.32	Kansas	16
274406.76	Kentucky	17
309084.32	Louisiana	18
1124830.83	Maine	19
166027.96	Maryland	20

289361.37	Massachusetts	21
1167316.34	Michigan	22
293649.81	Minnesota	23
300866.41	Mississippi	24
799076.23	Missouri	25
421316.6	Montana	26
497475.26	Nebraska	27
921669.24	Nevada	28
143653.31	New Hampshire	29
297260.33	New Jersey	30

537004.17	New Mexico	31
459393.37	New York	32
563844.86	North Carolina	33
280152.72	North Dakota	34
113938.64	Ohio	35
619446.62	Oklahoma	36
626281.85	Oregon	37
514720.08	Pennsylvania	38
676933.54	Rhode Island	39
1283008.67	South Carolina	40
127588.72	South Dakota	41

416500.36	Tennessee	42
126711.54	Texas	43
510233.49	Utah	44
562330.25	Vermont	45
518604	Virginia	46
905825.75	Washington	47
427013.19	West Virginia	48
371729.68	Wisconsin	49
588840.3	Wyoming	50
245016.2	DC	51

Concluding thoughts:

The lowest amount of sales from all the states was from the State of Texas with 888 sales from Wellington Global Marketplace. The highest amount of sales from all the states from the State of Michigan with 9692 sales. As for the total billing, the state with the highest billing sum was the State of South Carolina with 1283008.6743 \$. The state with the lowest billing sum was the State of Ohio with 113939.6365 \$. While these numbers are quite volatile when compared to one another; are these calculations a good metric to evaluate the company's success in that particular state? Fortunately, further evaluation techniques could be utilized to see if these findings yield statistically significant results. Nevertheless, the hypotheses that the total quantity of sales and the total amount from billing compared to the total quantity of sales per state and the total amount from billing per state shall be tested under a regression analysis for statistical significance.

