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As per your request, I have analyzed the Demographic Data provided. Please see the results of the customer buying patterns below.

1. Do customers in different regions spend more per transaction? Which regions spend the most/least?

The data indicates the West not only has the most transactions, they also spend the most per transaction. The West is followed by the East is total amount spent and average per transaction. While the North is last in number of transactions, they are third in total amount spent and average spent. The South is interesting in that it produces the second most transactions but comes in last for total amount spent and average per sale.

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| --- | --- | --- | --- |
| Region | Number of Transactions | Total Amount Spent | Average Spent |
| North | 16,000 | $11,922,580 | $745.16 |
| South | 20,000 | $5,042,184 | $252.11 |
| East | 18,000 | $16,523,450 | $917.97 |
| West | 26,000 | $33,385,350 | $1284.05 |



1. Is there a relationship between the number of items purchased and amount spent?

On average, customers spend twice as much if they purchase between 2-7 items.

|  |  |
| --- | --- |
| Items purchased | Total Amount Spent |
| 1 | $4,703,965 |
| 2 | $9,557,061 |
| 3 | $9,609,120 |
| 4 | $9,618,610 |
| 5 | $9,368,027 |
| 6 | $9,622,197 |
| 7 | $9,442,385 |
| 8 | $4,927,143 |

The graph indicates that the number of sales with purchases of 2 or more items occurs much more frequently than single items. However, customers who bought 5 items accounted for most of the highest cart totals.



In summary, the data shows the majority of sales occurred in the West and the second highest amount in the South. The South actually accounts for the smallest purchase amount per transaction. A campaign to entice customers in the South to purchase an additional item will significantly increase revenue. This is clearly seen when you take into account the purchase amount nearly doubles with 2 or more items.

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