# *Customer Buying Patterns: Blackwell Electronics*

A little over a year ago, Blackwell launched its eCommerce website, and in reviewing the data from that time we've been able to see some interesting trends in the purchasing patterns of our customers. As we consider decisions about site-related activities (including online marketing and enhancements to the site), it's important that we understand the biggest drivers of sales in order to maximize revenue from both stores and .com. The data we've collected shows specifically that the transaction amount of a purchase is very much driven by a customer's age, region, and preferred shopping channel.

We can see, for example, that customers in certain regions spend considerably more per transaction than others. Across the company, the average transaction amount is $835, but this varies a great deal by region. Customers in the west spend the least with an average of $251 per transaction, and all of the transactions in the region are in the low-dollar range. On the other end of the spectrum, customers in the central region spend the most with an average of $1,290 per transaction. Customers in this region also contribute the highest percentage of mid-range and high-dollar transactions (over $2,000).
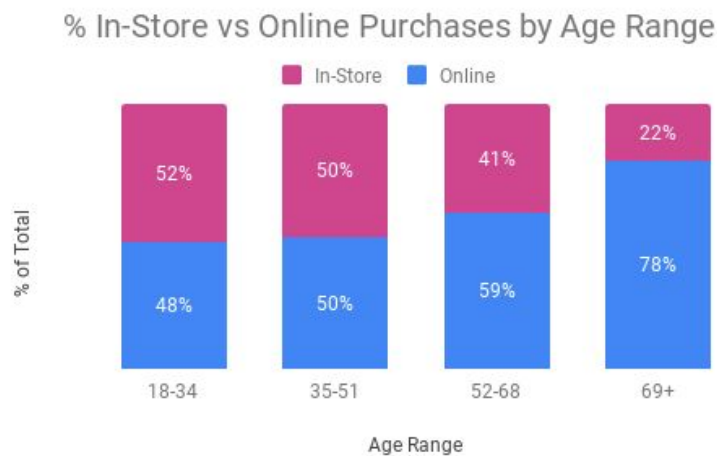
% of Transaction Amount Range by Region
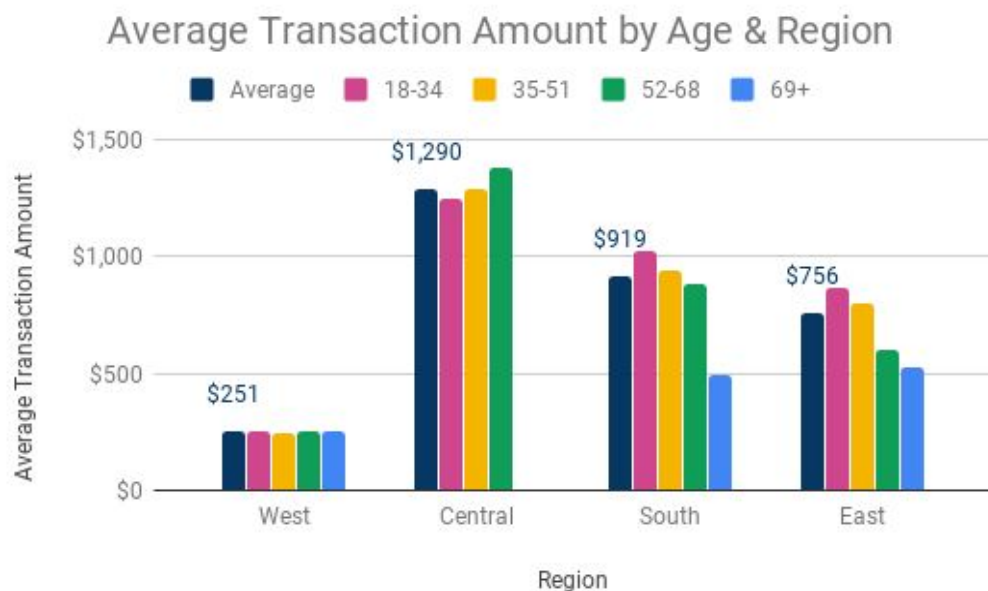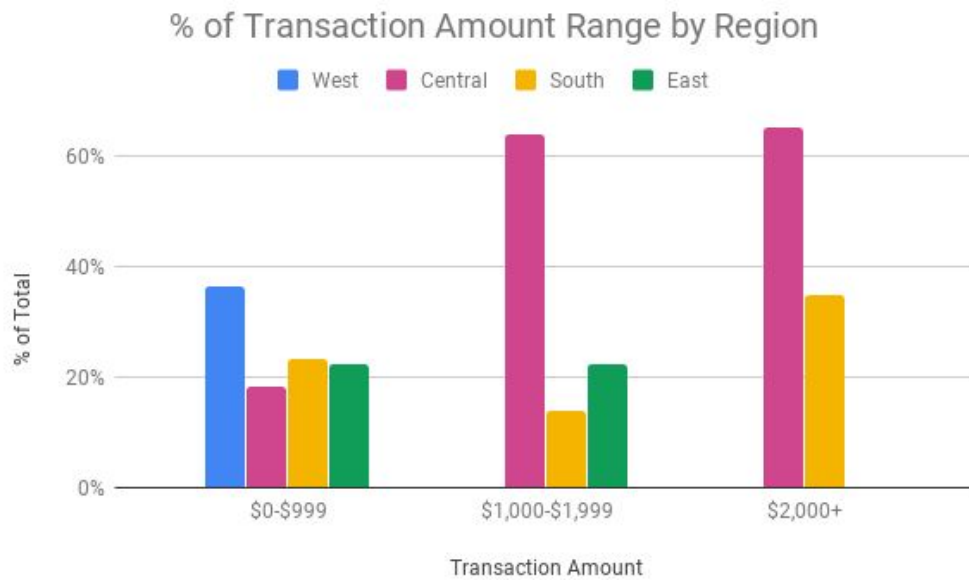
We can also see a difference in the age of customers between some regions. The western region (which has the lowest average transaction amount) also has the oldest customer base, with an average age of 57 years. The central region (which has the highest average transaction amount), by contrast, has an average customer age of only 39. Based on this information, we can tell that a customer's age influences the region in which they live as well as how much they spend on electronics, with younger customers spending significantly more on electronics on average than older customers. We can use this knowledge to predict the age of a customer in region based on their transaction amount.

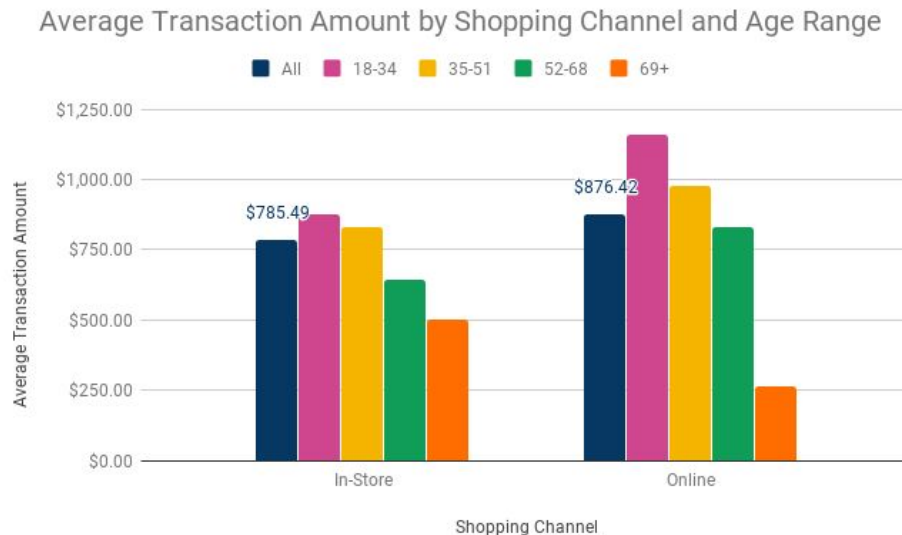**Average Age by Region for In-Store vs Online**
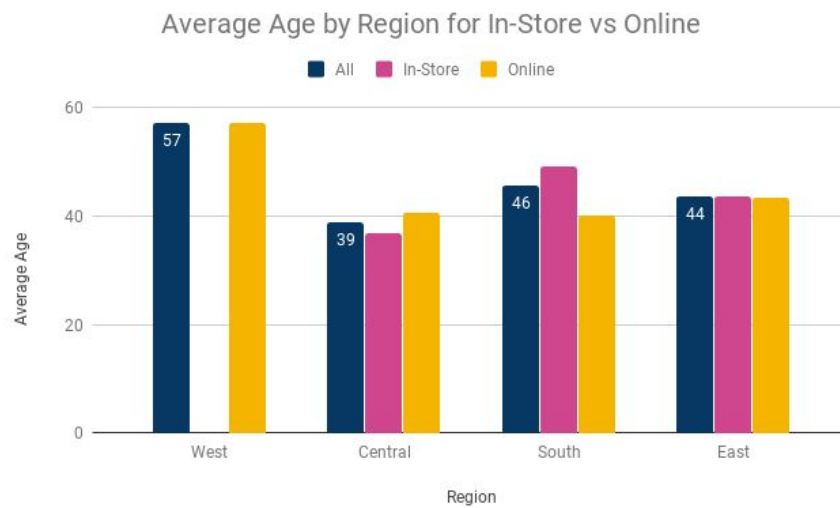
The age of a customer also relates to whether they do their shopping in-store or online. Younger clients don't have a preference for where they do their shopping, but as they get older, customers definitely have a preference for shopping online. A slight majority of those aged 52-68 prefer to shop online, but an overwhelming majority of customers over 69 prefer to do their shopping online.

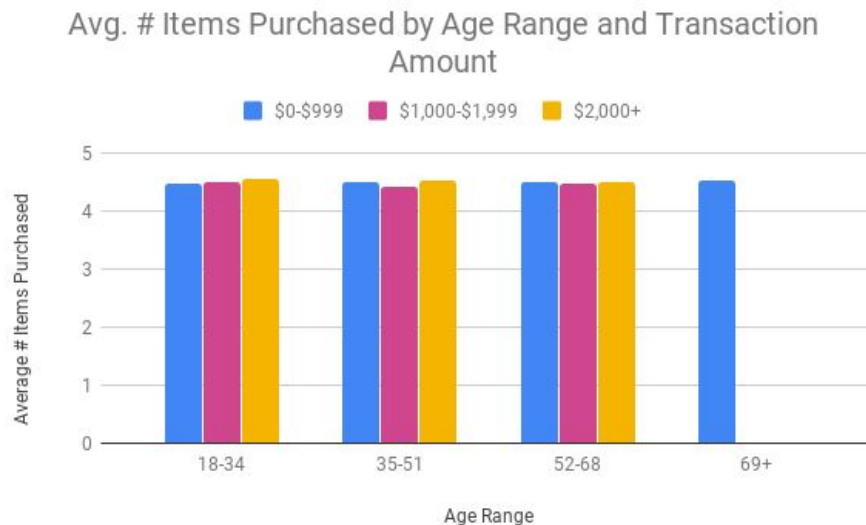We also ran a predictive model that shows us (with 83% confidence) that even more so than age, we can use the region and transaction amount of a purchase to predict whether it will take place in-store or online. For example, we can see that all of Blackwell's high-dollar transactions (over $2,000) are made online. If a customer lives in the western region, their purchase is also almost certainly going to be made online.
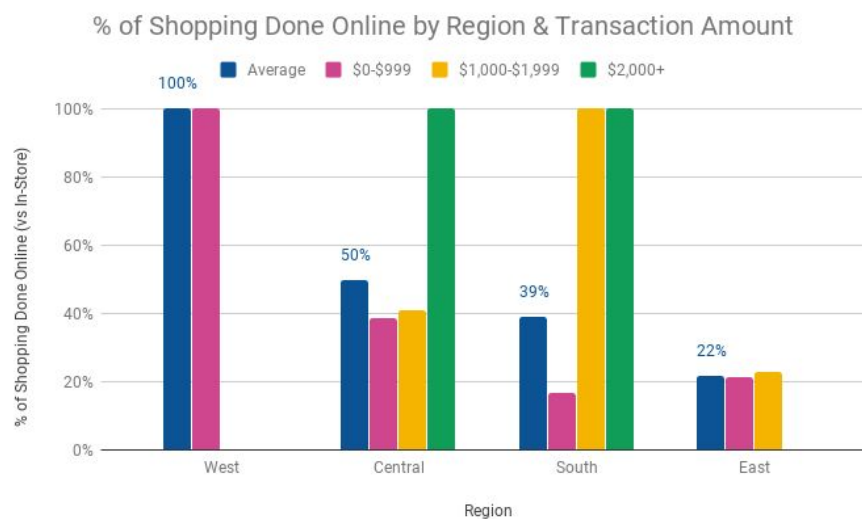
When comparing spending across channels, it's also worth noting that on average, customers spend more online than they do in-store. The average transaction amount of a purchase made on .com is almost $100 higher than one made in-store. In fact, the average transaction price on .com is higher for every age group except for those over 69.

Average Transaction Amount by Shopping Channel and Age Range

Legend: ■ All ■ 18-34 ■ 35-51 ■ 52-68 ■ 69+

In-Store: All = $785.49
Online: All = $876.42

Y-axis: Average Transaction Amount
X-axis: Shopping Channel

One thing that does not vary significantly based on age, amount spent, region, or shopping channel is the number of items purchased. The average number of items purchased is 4.5, which is pretty consistent across all age ranges and transaction amounts. All of the models we ran were unable to predict the number of items purchased with a confidence greater than 15%.

Avg. # Items Purchased by Age Range and Transaction Amount

Legend: ■ $0-$999 ■ $1,000-$1,999 ■ $2,000+

Y-axis: Average # Items Purchased
X-axis: Age Range

Based on all of the data, my recommendation would be to focus site enhancements and online marketing resources on:

- Getting older customers and customers in the western region to spend more overall
- Encouraging younger and middle-aged customers to do more shopping online
- Persuading customers in the eastern and southern regions to do more shopping online