



FASHION ECOMMERCE TRENDS:  
JAPAN, 2019

JANUARY, 2020

Revenue Time Series: 2019

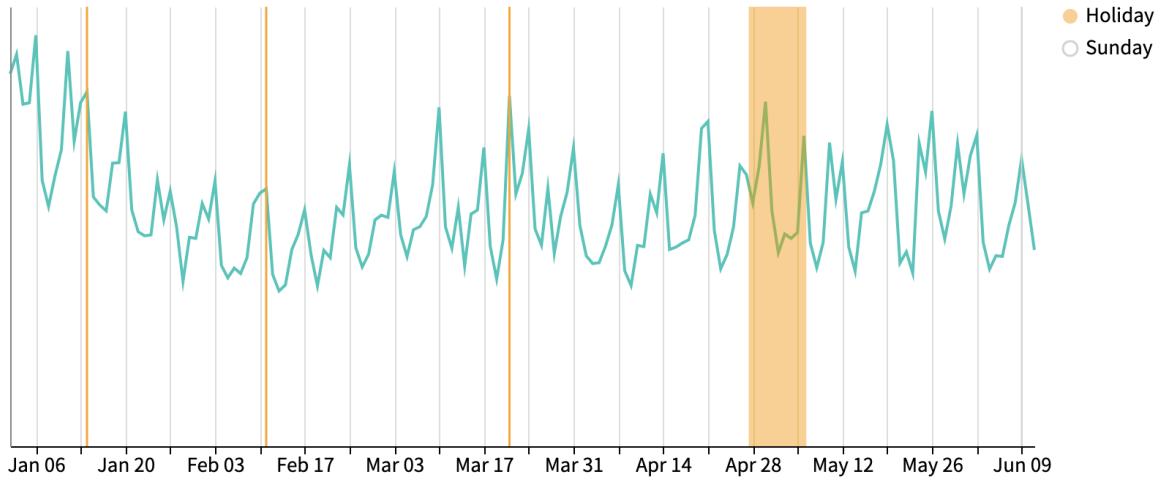


Figure 1: Cyclical nature of online shopping. The revenue peaks almost every Sunday unless it's a holiday.

Revenue by Weekday (%)



Figure 2: Sunday is the most popular day for buying fashion items online.

Japan is one of the largest eCommerce markets in the world with more than 80 million online shoppers. Revenue in the eCommerce market is projected to reach 86 billion USD in 2019 with fashion industry contributing 14 billion of that. As a virtual fitting solution trusted by some of the biggest brands across the world, Virtusize is in a great position to observe online shopping trends. Millions of rows of fashion eCommerce data tell an interesting story.

The data discussed below comes from purchases made in 2019 on more than 40 Japanese fashion retail websites. Looking at the revenue time series in Figure 1 some patterns emerge. Almost every Sunday there's a peak in revenue unless it's a holiday weekend. A study done in 2016 found Sunday to be the most popular day for online shopping in both US and UK, so it's not just a trend in Japan. Looking more broadly, the daily revenues go down in January reaching the minimum in mid February. Then the numbers slowly increase until leveling off in mid March. Cumulative numbers for

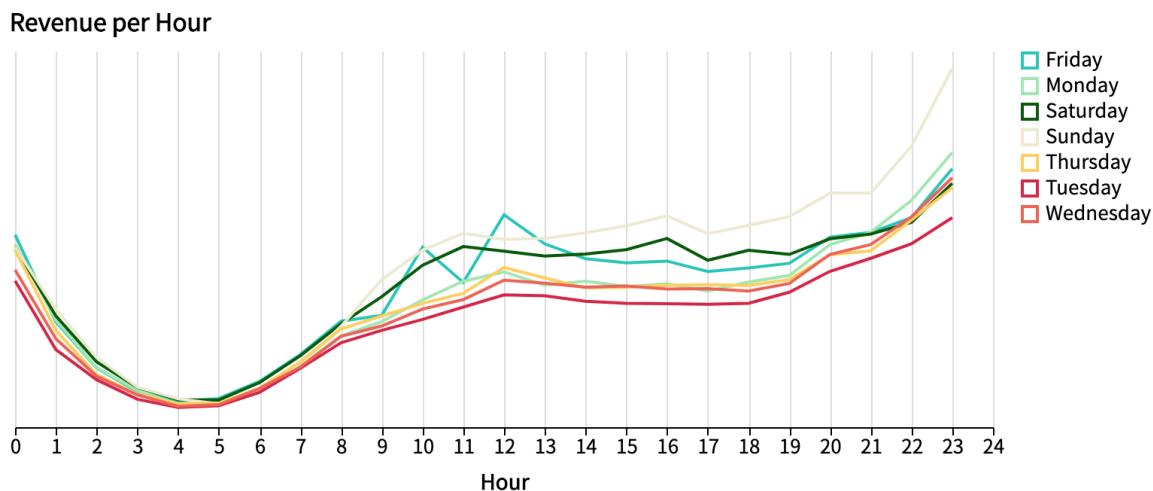


Figure 3: Hourly purchasing habits of online shoppers in Japan.

each weekday in Figure 2 confirm the popularity of Sundays. Tuesday is the least popular day for spending money on clothing.

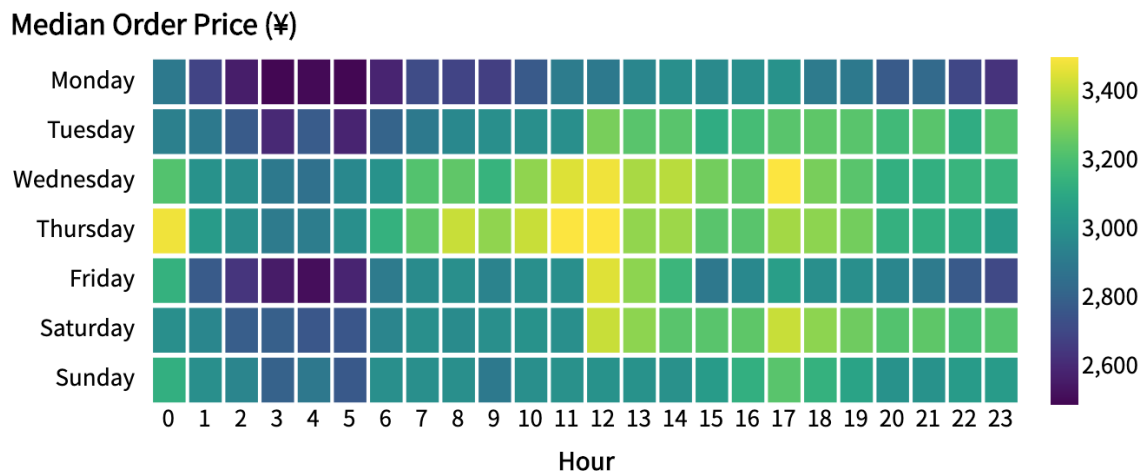
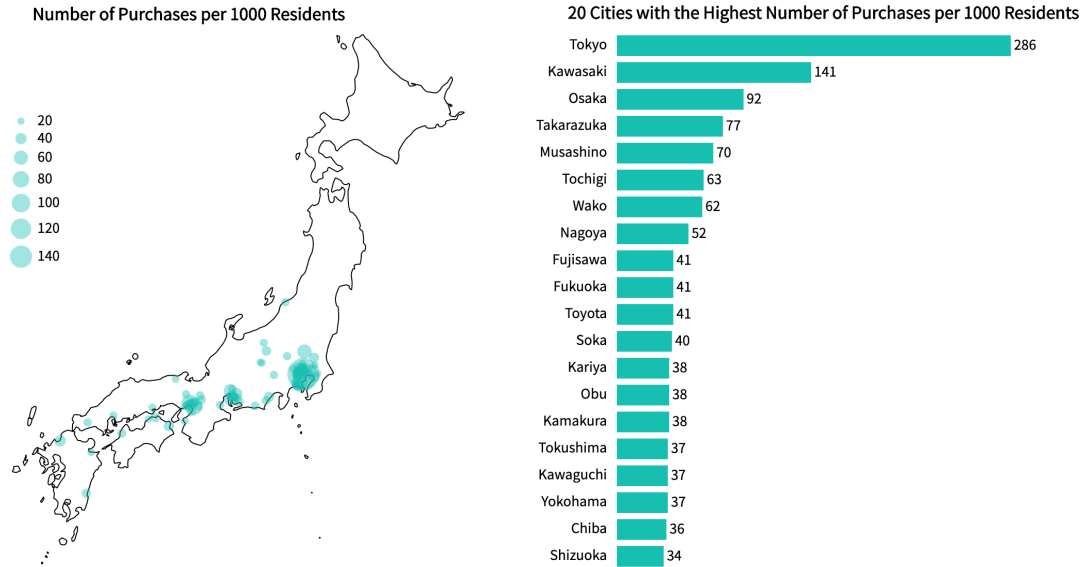


Figure 4: Median order price in yen for each weekday and hour.

Figure 3 shows the total revenue for each hour. The number of online orders starts going up at 5:00 in the morning and plateaus between 10:00 am and 7:00 pm. Then it starts increasing again until reaching the peak between 11:00 pm and midnight. A survey of more than 66 thousand Japanese done in 2011 showed that the average time people went to bed was 11:15 pm. Another study last year revealed that Japanese get the least amount of sleep out of 28 countries tested, so it is not surprising that people are doing online shopping late into the night.

The amount of money shoppers spend buying clothes and accessories depends on

the day of the week and hour as shown in Figure 4. The most expensive orders are made in the middle of the week around lunch time, while the least expensive happen during night hours, especially on Fridays and Mondays.



(a) All cities with more than twenty purchases per one thousand residents. (b) A list of twenty cities with the highest number of purchases normalized to their populations.

Figure 5: Cities with high rates of online shopping.

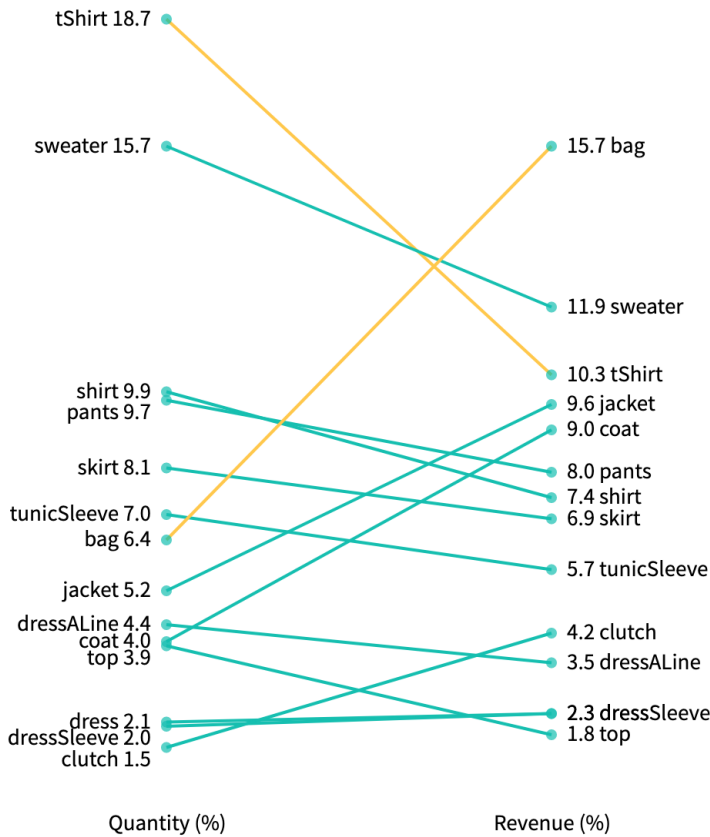
Figure 5 shows cities with the highest rates of online shopping for fashion items. People in the areas around Tokyo, Osaka, and Nagoya purchase a lot of clothing online, while people in Hokkaido make fewer than twenty purchases per one thousand residents and don't even appear on the map in Figure 5a.

It is not only interesting to see when people buy, but also what they buy. Figure 6a shows the relative share for the number of items bought as well as the revenue they bring in for different product types. By far the most popular items to buy online are tShirts and sweaters. Probably mainly because it is a lot easier to order the right size for a tShirt rather than jeans without trying it on. That's where fitting solutions like Virtusize can help. If looking only at items bought after using Virtusize, pants are the second most popular items bought.

TShirts might be bought most often, but they are third when it comes to revenue. Bags bring in the most money when compared to other items. They only make up 6.4% of the items bought, but contribute 15.7% to the total revenue. The percentage point difference – revenue share minus quantity share – is shown in 6b. Bags and tShirts have the highest differences as was evident from the steeply sloping lines in 6a.

Bags make up the largest portion of the revenue because the median price for a bag is more than two times higher than that for a tShirt as seen in Figure 7. Coats and clutches are the most expensive items, while tops and tShirts the least expensive.

### Quantity Share vs Revenue Share for Different Product Types



Product Type	Share Difference
tShirt	-8.4
sweater	-3.8
shirt	-2.5
top	-2.1
pants	-1.7
tunicSleeve	-1.3
skirt	-1.2
dressALine	-0.9
dress	0.2
dressSleeve	0.3
clutch	2.7
jacket	4.4
coat	5.0
bag	9.3

(a) Relationship between the share of the total number of items bought (left circles) and the revenue share (right circles).

(b) The percentage point difference between revenue share and quantity share.

Figure 6: Quantity share, revenue share (a) and their difference (b) for various product types.

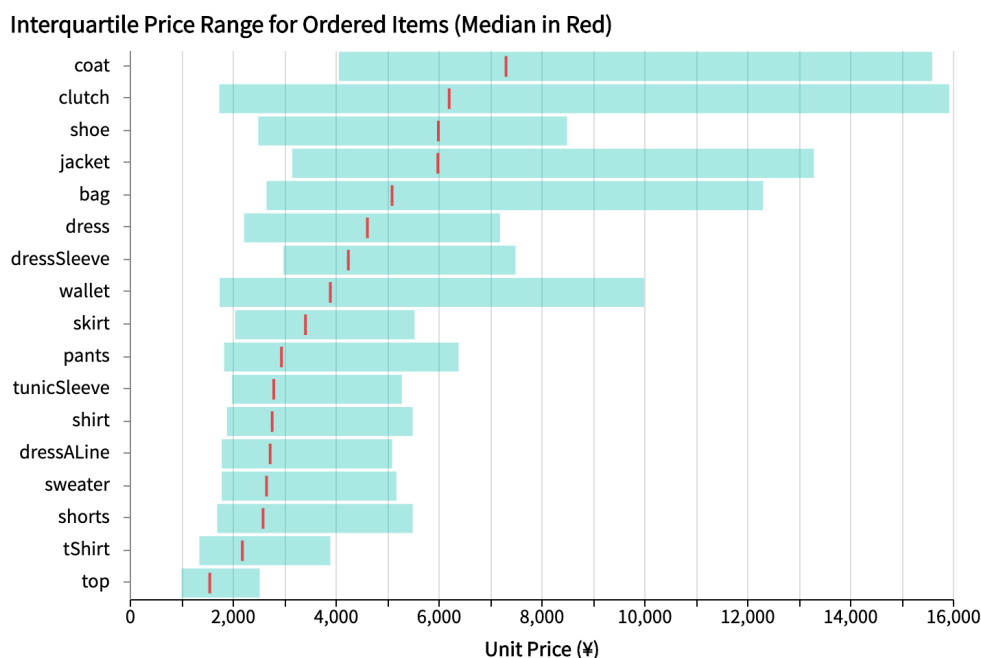


Figure 7: Price ranges for clothing items ordered online. The left side of a bar is the first quartile, the red line is the median, and the right side of a bar is the third quartile.

#### Top 5 Most Popular Sizes Ordered in 2019: Share of Total (%)

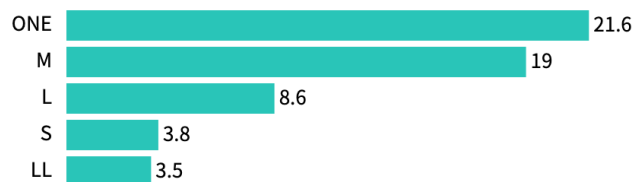


Figure 8: Top five most popular sizes for orders made in 2019.

Since tShirts and sweaters are bought online most often, it is not surprising that the most popular size is ONE, a size that supposedly fits all (see Figure 8). The second most popular size is Medium. Together they make up 40% of all purchased fashion items.

Anyone who has walked the streets in Japan knows that Japanese do not favor bright colors in their clothing. That is confirmed in Figure 9. Neutral colors are at the top of the chart with black and white taking the first two spots. The eye catching red and yellow are ten times less popular than black.

What the 2019 data from online orders reveal is that people tend to shop more often on weekends, especially Sundays. The most popular time for purchases is late in the evening, although more money is spent per order during work days around lunch time. TShirts are bought most often, but bags bring in the most revenue. Black is the

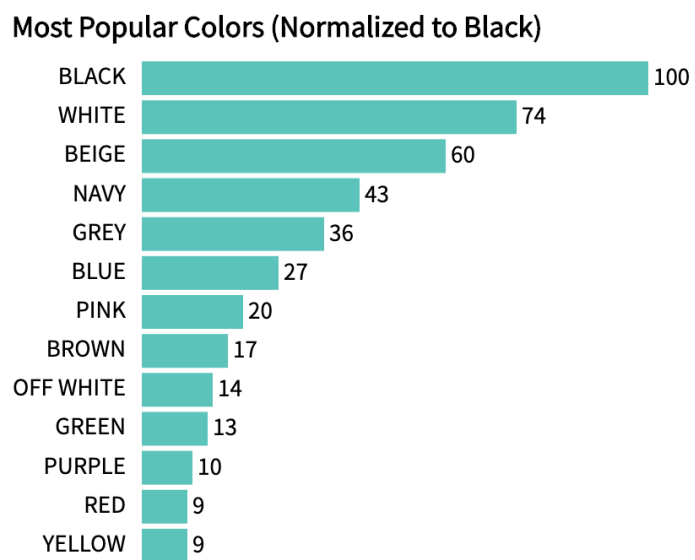


Figure 9: Thirteen most popular colors for fashion items ordered in 2019.

color of choice for a lot of shoppers. These are just some of the observations obtained from the data. For more insights visit Virtusize website where a second paper will be posted shortly.