How Alibaba uses big data to understand China’s shoppers

Anna Hamill

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Author(s): **Anna Hamill**
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Read Part Two of the series on how Alibaba uses first and third party data to develop campaigns for China's offline retail sector.

China's online shoppers are anticipated to spend more than US$1 trillion online in the next 12 months. By 2019 sales are projected to total nearly $2 trillion, more than 3.6 times as much as the U.S.

At the heart of China's online shopping story is Alibaba, whose rise from fledgling startup to the world's biggest e-commerce player caught many established competitors off-guard.

Alibaba's US$25 billion initial public offering – the largest in history – made the brand a household name outside of China and the fourth most valuable tech company by market cap, ahead of Facebook, IBM and Oracle. Alibaba-owned websites now hold an estimated 80% of total online shopping market share in mainland China. Its 2015 Singles Day promotion alone generated more than US$14 billion in sales – a 60% increase on the previous year and a total that eclipsed Facebook's entire 2014 revenue.

Alibaba's online numbers are staggering – but it's only a part of their role in the Chinese retail story.

Alibaba Group's Director of Big Data and Technology, Danfeng Li, estimates that online shopping makes up less than 20% of China's total retail landscape, which is estimated by UBS to have grown six-fold since 2000.

For Alibaba, the focus is not just on continuing its own extraordinary growth in the online sector but putting itself squarely in the middle of China's offline retail landscape by using big data from its own consumers to fuel China's online to offline revolution.

Li spoke frankly about how Alibaba is using its consumer data expertise to drive online to offline conversions in China at the MRMW 2016 conference in Kuala Lumpur. Download the full presentation.

Big Data is the future of retail – online and offline

Although online growth is very fast, offline still counts for most sales – in China, bricks and mortar stores account for about

80% of total retail spend.

Li believes that the effective use of data is not only the future of Alibaba's business, but will also be the major driver in unlocking growth for China's wider retail sector.

But many offline retailers in China struggle to use data effectively, putting them at a disadvantage to online competitors.

"If (the store) doesn't have a membership scheme or if (customers) pay cash, you don't know who bought your stuff," said Li.

But as the gap between online and offline retailing narrows in China, Alibaba sees itself as a link between the two sectors: one with an abundance of customer data, and one struggling to fill the gaps.

"The reason we help offline merchants is a lot of brands are born on Alibaba's platform and become so big that they open bricks and mortar stores in the cities, so people can touch and feel their products. And vice versa – a lot of offline businesses want to get online with Alibaba," said Li.

Technology is the key to creating a holistic picture of Chinese consumer behaviour across both online and offline platforms. And data is an increasingly valuable commodity.

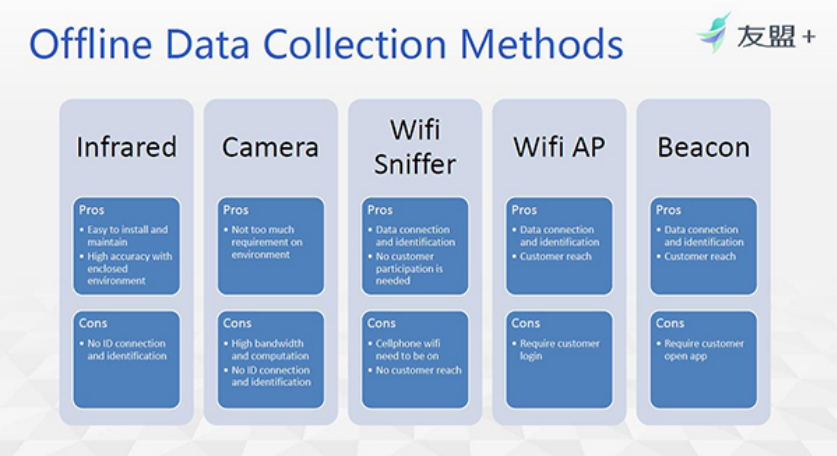
"In China there's probably 2000 wifi providers, and many are giving the wifi for free because they are trying to get the data – and that data is worth a lot more. That's what they believe right now."

That data is, for the most part, in customers' pockets: a wifi-capable smartphone.

"The bridge between online and offline is already very small, because there is a lot of technology available which can help accurately locate where the customer is in the building. Most people carry a cellphone, so you can get a lot of data – wifi can enable us to do that."

How Alibaba captures the data

According to Li, Alibaba uses wifi sniffers and beacons among other methods in participating retail stores to harvest first party data about store visitors. This data can be used to determine traffic flows in stores, areas of longer engagement or even 'bounce rate' – how many customers enter a store then leave quickly.



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This information helps offline retailers to make decisions on anything from layout of the store to determining the effectiveness of a coupon and almost everything in between.

"By using wifi, beacons and apps, you can link the customer and know if it's a new one or an old one," said Li.

Li explained how wifi sniffers work: "If you open your wifi, your cellphone will continue to send a signal out looking for any wifi available. So the wifi server can capture this information. This information is a unique ID for your device. Then this information will be transported to our server where we encrypt the data for data safety."

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"If you have an app with beacon capability, the signal will send through your cellphone to the server and say this particular cellphone is at this particular location. So in that case, we collect all the data."

"If you don't open your wifi, there's no way we can track you," said Li.

"About 80% of people actually open their wifi. If you open wifi, we can get your MAC address (a unique identifier for network interfaces) for sure but in terms of how much data we can link to our back-end, it's about 60-70%."

Although Alibaba is able to extract user data, it is unable to reach customers directly due to privacy laws.

Li emphasized the privacy parameters of harvesting this data: "For a wifi sniffer, we can only track data. We can't reach the customer because there is no permission whatsoever. If we reach the customer by this method, this will be a very bad privacy practice. But we can have an agreement page, then we can reach the customer from that page."

"(Alibaba is) not going to use this on a personal level, we only provide a group profile – only when we pass a certain number of customers can we provide the profile, otherwise we won't use it."

Using first and third party data to develop accurate consumer models

Alibaba has around 20,000 consumer data models based on specific behaviours or demographics. Some of these models have up to one million Chinese customers.

Linking the first party data collected from in-store visitors and third party data from Alibaba's own properties builds big-picture customer models that offer significant insights to offline retailers.

"For beacon and wifi, the advantage is we can link the data. This will be very important," said Li.

User data scraped from Alibaba's own apps form the final link in the chain. Alibaba's massive market penetration in China means it holds, accordingly to Li, about 80% of China's PC, internet and app data. It can then integrate that with the first party data collected in stores, creating a singularly powerful data model.

Li explained: "First we have a sensor and the sensor will send the data to the cloud. In the cloud, we can join the data between first and third parties. This is very important because first party data includes your cellphone's data. And third party data can give you a lot of insight about your customers."

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By doing this, offline retailers can create consumer profile models which can be used for advertising purposes.

"By joining with third party data, we know a lot about (a store's) customers," said Li.

"(Alibaba) has hundreds of millions of people's true ID data so we can have a very good model. That's where we can get the demographic information," said Li of how the company confirms veracity of its data.

"In China, the majority of cellphones have Alibaba apps installed. AliPay is the biggest one but we also have Taobao, T-Mall and some map apps which are very popular."

"By having those apps on your phone, we can link together your MAC address with your Taobao account as the final ID to link everything together. This is where we link everything. Taobao also links to cookies online. So basically, we know this person's online, mobile and offline information – all linked. Of course, this is not 100%. But we have a pretty high percentage."

The data usually remains consistent over time.

"You can change your computer or change your cellphone, but you're probably going to use the same ID to log into Alibaba services," said Li.

"By connecting everything to those IDs, (Alibaba) can actually keep user profiles for a very long time and through a lot of changes… we know spending ability because (Alibaba property) Taobao counts for the majority of online spending in China, so this is a pretty good reflection of how much Chinese spend online," said Li.

"We actually have much more than this. We know what brands those customers are shopping online and what their other interests are. That is very useful (for brands) when targeting those people."

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About the Author

Anna Hamill is Warc's Asia Editor. Contact her at anna.hamill@warc.com.