

## Rearchitecting the Malls: The Shifting U.S. Retail Landscape

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### **Abstract:**

Retail shopping is being revolutionized by the Internet and e-commerce. Big data analytics, artificial intelligence, and Internet of Things devices have further fueled the transformation.

**Keywords:** retail shopping | e-commerce | big data analytics | artificial intelligence | malls

### **Article:**

In all good architectural designs—software included—form follows function. This implies that an architectural design is based on how the building/software will be utilized. Difficulty presents itself if the function changes, as is the case with retail shopping malls. It is predicted by Coresight Research, Inc. that roughly 25% of malls will close in the next three to five years.<sup>1</sup> Part of the trend is due to the fact that consumers, more than ever, have access to the Internet, excellent logistics, and technically advanced devices. In addition, subscriptions to broadband are increasing; 2.9% in 2008, and they are predicted to reach 19.8% by 2024. This upward trend is supported by the growth of e-commerce. For example, during 2010–2019, the compound annual growth rates of the revenues of Amazon and Chinese online commerce company Alibaba were 26 and 51.8%, respectively.<sup>2</sup>

Now, the malls are forced to change their functions because retail shopping is evolving into to a digital format. When online shopping first appeared, stores created websites to only view items, and the actual purchase happened inside the physical store. As shipping became inexpensive and the cryptography of credit card purchases improved, the convenience of online retail purchases became more prevalent. The subsequent challenge was the decreasing foot traffic in the physical store, where some stores started offering in-store pickup or in-store-only purchases to attract customers. A popular women's athletic retailer went as far as offering free in-store yoga classes,

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<sup>1</sup> *US store closures 2020 outlook: Covid-19 update-prolonged impact set to drive up closures*, June 2020, [online] Available: <https://coresight.com/research/us-store-closures-2020-outlook-covid-19-update-prolonged-impact-set-to-drive-up-closures/>.

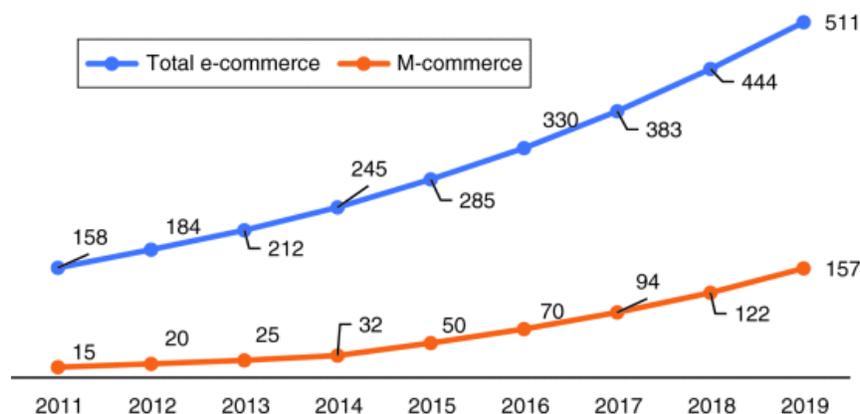
<sup>2</sup> *The new normal: How Covid-19 is influencing consumer trends*, July 2020, [online] Available: <https://www.fitchsolutions.com/white-papers/new-normal-how-covid-19-influencing-consumer-trends>.

stylists, and free alterations. But these tactics of the smaller mall stores will not sustain the mall's physical existence.

Shopping is part of our culture. But how we shop has evolved. In the 1980s and 1990s, the mall was the place to shop and socialize and even a pleasant place to work. Now, shopping and socializing online are the norm, and many can work from home, thus making online shopping more convenient. According to the U.S. Census Annual Retail Trade Survey, the trend of e-commerce spending continues to rise. In the second quarter of 2020, retail e-commerce sales in the United States were 44.5% higher than in the second quarter of 2019. In the same time period, total retail sales decreased by 3.6%.<sup>3</sup> Worldwide, e-commerce spending during 2017–2023 is expected to grow from US\$2.4 trillion to US\$6.5 trillion.<sup>4</sup>

Commerce evolution is nothing new. At the turn of the 19th century, there were mom-and-pop shops on neighborhood corners and Main Street for retail items. As time progressed, department stores appeared in big cities. Your parents and grandparents will recall having to get on a train or bus to travel to a city for department store shopping.

Historically, shopping is impacted by social and economic changes (wars, technology innovations and improvements, and pandemics). According to the National Association of Realtors, in 2017, a wave of mall closures in the United States commenced, and by 2019, more than 9,000 stores closed in the United States.<sup>5</sup>



**Figure 1.** Total e-commerce and m-commerce in the United States (in US\$ billion). (Data source: Euromonitor.)

The retail mall decline began with technology changes, especially when shopping became possible and trustworthy through a mobile device. M-commerce facilitated e-commerce due to superfast Internet connections, increased security, multiple ways to pay, excellent transportation logistics, and free shipping, along with easy return policies and many individual store

<sup>3</sup> U.S. Census, *Quarterly retail e-commerce sales 2nd quarter 2020*, Aug. 2020, [online] Available: <https://www2.census.gov/retail/releases/historical/ecom/20q2.pdf>.

<sup>4</sup> D. Chaffey, *Forecast growth in percentage of online retail/Ecommerce sales 2017 to 2023*, Oct. 2020, [online] Available: <https://www.smartinsights.com/digital-marketing-strategy/online-retail-sales-growth/>.

<sup>5</sup> *2020 case studies on repurposing vacant retail malls*, 2020, [online] Available: <https://www.nar.realtor/sites/default/files/documents/2020-case-studies-on-repurposing-vacant-retail-malls-05-08-2020.pdf>.

applications. M-commerce as a proportion of total e-commerce in the United States increased from 9.6% in 2011 to 30.7% in 2019 (Figure 1). Websites and mobile apps are user friendly, inviting all types of consumers who now trust this way of shopping.

## The Generational Difference

Generation Z consumers (those born from approximately 1996 to 2010) are less likely to travel to the mall for a homecoming dress or soccer cleats; instead, they may order two or three online, choose one, and easily return the rest, all with free shipping. A big trip to an anchor store such as Macy's or Nordstrom is not necessary or even desirable for needed items. A 2018 study conducted by the IBM Institute for Business Value and the National Retail Federation on Generation Z retail preferences in 16 countries rated time savings and shipping as most important, followed by getting a "deal" and fast checkout. Some stores also provide their own mobile application, making the shopping experience efficient. Loyalty rewards, easy checkout, and unique features such as a countdown on the user's mobile device, indicating the exact moment an item will be restocked, make the customer experience a personalized one. In addition, the study found that members of this generation, even if shopping in a brick-and-mortar store, will use their mobile device in the store to price compare items, look for coupons, send pictures, post social media updates, and track rewards for loyalty shopping.<sup>6</sup> Clearly the mobile device is part of the shopping experience whether inside or outside a store.

Even though Generation X (born approximately 1965–1980) consumers are among the most active online shoppers, averaging 19 transactions per year (for example, they make 20% more online purchases than the younger generations),<sup>7</sup> millennials are more interesting and profitable to analyze because they are in their prime earning years. For millennial consumers (those born from approximately 1981 to 1996), 2019 saw an increase of 36% in their online purchases using mobile devices as compared to 16% in 2017. This points to these shoppers making 60% of their purchases online.<sup>8</sup> The online priorities for millennials are promotions and delivery speed. In 2019, the online web platform CouponFollow, an app that tracks the use of coupon codes from online merchants, stated that U.S. millennial consumers made 60% of their purchases online (40% in stores), compared to 47% (53% in stores) in 2017.<sup>8</sup>

In 2017, one-third of baby boomers (born from approximately 1946 to 1964) aged over 65 in the United States had never used the Internet, and half lacked Internet access at home.<sup>9</sup> Some innovative companies have taken steps to introduce this population to online shopping. For example, to improve its services for elderly people, Chinese e-commerce company Alibaba has recruited older consultants. They created an app called *Taobao's for Elders*, which features a

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<sup>6</sup> M. Griffin, *47% of Gen Zers use smartphones while shopping in stores*, June 2018, [online] Available: <https://retailtouchpoints.com/features/trend-watch/47-of-gen-zers-use-smartphones-while-shopping-in-stores>.

<sup>7</sup> *Ecommerce statistics*, 2020, [online] Available: <https://99firms.com/blog/e-commerce-statistics/#gref>.

<sup>8</sup> J. Melton, *Millennials now do 60% of their shopping online*, Mar. 2019, [online] Available: <https://www.digitalcommerce360.com/2019/03/26/millennials-online-shopping/>.

<sup>9</sup> J. Fields, *We are leaving older adults out of the digital world*, May 2019, [online] Available: <https://techcrunch.com/2019/05/05/we-are-leaving-older-adults-out-of-the-digital-world/>.

pay-for-me option if the elder needs a child to pay for a product.<sup>10</sup> Other Chinese e-commerce start-ups have also focused their services on the baby boomer generation.<sup>11</sup>

## The Retail Revolution

Brick-and-mortar mall competition first arrived in the form of memberships to wholesale stores such as Target/Walmart and Costco/BJ's. But the revolutionary change to retail started when the Internet opened to the public in 1991 and the first online retailers such as Amazon (1995) arrived on the scene.<sup>12</sup> Other online retailers such as eBay followed, when e-commerce platforms became available. At this point, the retail paradigm as we knew it began to crack.

There were some indicators of this paradigm shift in retail. In 2006, CNN noted that shortages of popular toys in stores fueled web traffic in cyberstores such as etoys.com, overstock.com, bestbuy.com, and so on.<sup>13</sup> By 2010, the tradition of crowding retail stores the day after Thanksgiving, called Black Friday, had been joined by Cyber Monday. Online retailers were competing for holiday shoppers, and in 2011, CNBC declared that Black Friday and Cyber Monday had turned into one big shopping weekend. This point was signaled by the fact that the online deals and promotions being offered prior to Black Friday and the store deals were becoming very similar (that is, not waiting until Cyber Monday).<sup>14</sup> The 2011 declaration claimed that brick-and-mortar and online stores fuel each other's sales. New online models of payment processing helped in this shopping revolution with the availability of additional online payment methods such as PayPal and Venmo. By 2018, at least 35% of consumers made mobile purchases, accounting for 40% of Black Friday sales.<sup>15</sup> However, the entrance of big data, predictive analytics, and mobile devices sealed the deal for cybershopping.

E-commerce was put on steroids with big data/predictive analytics and mobile devices; add in a global pandemic, and we are looking an accelerated shift toward e-commerce that was already in high gear. With the information that data analytics can provide, the modern shopping experience includes a more informed retailer and consumer. Analytics, along with artificial intelligence (AI) and Internet of Things (IoT) devices, create digital marketing/advertising to assist in retailer decision making related to operations, innovations, and anything else deemed relevant. These technologies give retailers a deeper understanding of their customers to target-market different products. Analytics can help analyze market trends, customer behavior, and competitor behavior, while smart devices (the IoT and AI) can customize and target ads and improve customer service, gaining an excellent return on investment by integrating these technologies with their

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<sup>10</sup> S. Dorfer, *Elderly-friendly: Taobao's e-commerce app for seniors*, Feb. 2018, [online] Available: <https://www.stylus.com/elderlyfriendly-taobaos-ecommerce-app-for-seniors>.

<sup>11</sup> S. Venza, *How the silver generation is becoming the new market to propel e-commerce in China*, Nov. 2019, [online] Available: <https://en.cifnews.com/how-the-silver-generation-is-becoming-the-new-market-to-propel-e-commerce-in-china/>.

<sup>12</sup> *The history of e-commerce: How did it all begin*, Oct. 2011, [online] Available: <https://www.miva.com/blog/the-history-of-ecommerce-how-did-it-all-begin/>.

<sup>13</sup> P. Kavilanz, *For e-tailers it's Cyber Monday*, Nov. 2006, [online] Available: [https://money.cnn.com/2006/11/27/news/economy/cyber\\_monday/](https://money.cnn.com/2006/11/27/news/economy/cyber_monday/).

<sup>14</sup> *Black Friday vs. Cyber Monday: The rivalry is over consumers won*, Nov. 2011, [online] Available: <https://www.cnbc.com/id/45278120>.

<sup>15</sup> M. Lazar, *Retailers: Don't ignore these mobile commerce statistics for 2019*, Sept. 2019, [online] Available: <https://www.readycloud.com/info/retailers-dont-ignore-these-mobile-commerce-statistics-for-2019>.

marketing strategies.<sup>16</sup> Consider product sensors (for example, GPS, biometric, motion, and so on) that collect data and reveal where the product was bought and what was done with it postpurchase.<sup>17</sup> For example, IoT and AI technologies could be used to assist advertisers target-market fitness clothing or health food to a person who purchased a fitness watch, target-market sporting activities or health food from biometric data collected, or automatically reorder beer when your smart refrigerator is running low. Analyzing product data assists retailers in uncovering consumer preferences and ultimately satisfies the needs of consumers right away.

Data analytics was refined and enabled business to really understand and act on what a consumer wanted and when they wanted it. Targeted ads/notifications are pushed to the consumer to facilitate what Google calls a *micromoment*. Micromoments “occur when people reflexively turn to a device—increasingly a smartphone—to act on a need to learn something, do something, discover something, watch something, or buy something.”<sup>18</sup> During these moments, which usually occur on a mobile device, “decisions are made and preferences are set.”<sup>19</sup>

Companies now use analytics to mine data, text, and push the right information to the consumer at the right time. Specifically, the use of big data helps increase e-commerce by understanding/predicting a customer’s shopping behavior (that is, brands, shopping times, and demand). Retailers need to keep up with the evolving behavior of today’s consumer. Survey results showed that 82% of consumers will continue to shop online even after the social distancing restrictions from the pandemic recede.<sup>20</sup> Another way big data can increase e-commerce shopping is by improving the customer experience with options such as personalized marketing (for example, right message at the right time), a virtual concierge (for instance, targeted suggestions for an immersive experience), customer need forecasting (exceeding the customers’ support expectations), reducing customer attrition, more effective resource allocation, increasing the understanding of the internal team, and streamlined shipping.<sup>21</sup> Big data also improved online payment systems by identifying fraud, offering enhanced payment systems for mobile websites, and adding payment options such as PayPal and Venmo.

There is a next step for traditional retail. The solution is not to eliminate the malls and continue to move toward 100% online retail purchases. It is also not just about an efficient shopping experience. Retail businesses, whether brick and mortar or online, need to be agile. Consider

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<sup>16</sup> N. Joshi, *How AI IoT and big data analytics are transforming digital marketing*, Jan. 2019, [online] Available: <https://www.bbntimes.com/technology/how-ai-iot-and-big-data-analytics-are-transforming-digital-marketing>.

<sup>17</sup> S. Hall, *IoT is changing advertising here’s how to get in the game*, Nov. 2018, [online] Available: <https://quanticmind.com/blog/iot-changing-advertising/>.

<sup>18</sup> S. Ramaswamy, *How micro-moments are changing the rules*, Apr. 2015, [online] Available: <https://www.thinkwithgoogle.com/marketing-strategies/app-and-mobile/how-micromoments-are-changing-rules/>.

<sup>19</sup> J. Chan, *Why and how marketers should leverage micro-moments marketing*, Jan. 2020, [online] Available: <https://mention.com/en/blog/micro-moments-marketing/>.

<sup>20</sup> S. Sularia, *2020 consumer purchasing behavior and the pivotal events that shaped it*, Sept. 2020, [online] Available: <https://www.forbes.com/sites/forbestechcouncil/2020/09/08/2020-consumer-purchasing-behavior-and-the-pivotal-events-that-shaped-it/?sh=530e77ee3450>.

<sup>21</sup> J. Edwards, *7 ways predictive analytics can improve customer experience*, Apr. 2019, [online] Available: <https://www.cio.com/article/3387640/7-ways-predictive-analytics-can-improve-customer-experience.html>.

Amazon, who now controls 50% of online business in the United States.<sup>22</sup> How did the company achieve this? Because of its innovative offerings. A membership program is offered that provides free shipping and online streaming entertainment. They also sell their own products such as Kindle, Echo, and Alexa and offer webservices [Amazon Web Services (AWS)] to help other retailers grow their businesses. AWS assists other e-commerce retailers with website hosting, cloud storage, and database management and helps deliver content and e-mails to a customer base.<sup>23</sup> They have been successful at creating innovative ways to sell products for other retailers who use AWS.

Specifically, the use of big data helps increase e-commerce by understanding/predicting a customer's shopping behavior (that is, brands, shopping times, and demand).

### **Retail As A Service**

How can brick-and-mortar stores merge with e-commerce? They need to realize that more people than ever have access to the Internet but that they may still want to balance how much time they spend online and shop in a store. The traditional retail market can evolve by enhancing the customer experience to entice them back into the store. This can be done with a retail-as-a-service (RaaS) platform. RaaS is a platform that helps online retailers with transaction processing (for example, check out management, inventory control, and so on) and building customer experiences (for example, showrooming). This pertains to online brands as well as traditional brick-and-mortar stores. Examples include curbside pickup technical functionality being able to manage a sale the same way that it would be done in the store (for example, using discounts, coupons, basket calculations, and so forth). Other examples of RaaS are stores that focus on the experience rather than the sale. The customer trying out the product while the retailer analyzes how long the customer spends with the product determines the most popular products and how the customer interacts with the product.<sup>24</sup>

RaaS is one way brick-and-mortar malls can be agile and upgrade their offerings to stay relevant and current in the retail game. But this will not work for all the stores in malls. How can other stores be repurposed? Realtors and investors, such as life insurance companies, have been contemplating this reinvention for years. Some say it should be a place where guests can meet, eat, and be entertained; some are being rezoned to include residents, fitness centers, and parking garages—and could also have retail experience (RaaS) stores. These service offerings would be desirable to make the mall a one-stop shop for one's life needs. The bottom line is that the modern consumer manages his/her shopping experience. Retailers need to capitalize on the available technology to engage the growing number of both online and brick-and-mortar consumers, whether it is through an app or an in-store experience.

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<sup>22</sup> N. Stern, *Amazon at 25: A fascinating journey through retail history*, July 2019, [online] Available: <https://www.forbes.com/sites/neilstern/2019/07/11/amazon-at-25-a-fascinating-journey-through-retail-history/#722576fb3027>.

<sup>23</sup> K. Yadav, *What is AWS and what you can do with it*, July 2018, [online] Available: <https://blog.usejournal.com/what-is-aws-and-what-can-you-do-with-it-395b585b03c>.

<sup>24</sup> P. Schafer, *Retail as a service: No sales just experiences*, Aug. 2019, [online] Available: <https://www.handelskraft.com/retail-as-a-service-no-sales-just-experiences-5-reading-tips/2019/08/>.