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WALMART CHINA: CHALLENGING ALIBABA'S NEW RETAIL

Walmart's biggest learning experience is happening in the China market.

—Doug McMillon, Walmart CEO, which he described as “*off the charts*” in terms of digital retail.¹

Walmart miscalculated when it entered China using its “Every Day Low Prices” strategy. The low prices that American customers loved were not at all what the targeted Chinese customers were looking for in the Western supermarket. They wanted unique products and an excellent customer experience offered in a pristine, clean environment. Unlike the American customers, who were used to packaged and frozen foods, the Chinese wanted fresh fish, meat, and produce, things they couldn't find at Walmart.

If the mismatched Walmart US value proposition wasn't enough, it also struggled with local regulations, staff incentive schemes, logistics, and significant economic and cultural differences between regions. Unlike other retailers, Walmart was, however, unwilling to give up on the world's largest consumer market. Two decades after entering the country, it had learned to develop a model that worked in China. It operated over 400 stores and was one of the 10 largest brick-and-mortar retailers.

Then a paradigm shift occurred, leaving traditional retail at knifepoint. “New retail,” a term coined by Alibaba's Jack Ma to describe the full integration between online and offline commerce, was taking over, and China led the disruption. How could Walmart ensure its continued success in this new environment? An established retailer after decades of trial and error, what could Walmart do to lead the disruption? What should be its value proposition to the Chinese consumer?

¹ J. Motti, “Walmart Chief—Retail is about change, customer experience a team sport,” Retail Customer Experience, 18 January 2018, <https://www.retailcustomerexperience.com/articles/not-ready-for-proof-yet-walmart-chief-retail-is-about-change-customer-experience-a-team-sport/>, accessed 25 February 2019.

Filip Ziolk prepared this case under the supervision of Professor Ali Farhoomand for class discussion. This case is not intended to show effective or ineffective handling of decision or business processes. The authors might have disguised certain information to protect confidentiality. Cases are written in the past tense, this is not meant to imply that all practices, organizations, people, places or fact mentioned in the case no longer occur, exist or apply.

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Walmart

“A wide assortment of good quality merchandise” at “the lowest possible prices.”

- Sam Walton, Walmart founder

Walmart is one of the wonders of the modern world, built from scratch in a hyper-competitive environment, scaled from nothing to the largest company in the US by revenue and by headcount, all resulting from a singular vision of saving everyday people money with everyday low prices. It is the most successful social welfare system ever implemented, saving billions and billions of dollars for everyday Americans without costing taxpayers a dime. It is a testament to the power of compounding interest, to the power of a focused plan executed violently for decades.²

Walmart was an innovation leader. It developed a private satellite communication network to manage operations, computerized point-of-sale systems, and innovated its logistic fleet or electronic data interchange (EDI) and many other aspects of its business.³ Its business covered various models of retail, e-commerce, and its own brand development.

Discount stores (since 1962) offered quality low-priced products in pleasant environments, including automotive products, health and beauty aids, home furnishings, electronics, hardware, toys, sporting goods, lawn and garden items, pet supplies, jewelry, and housewares.

Supercenters (since 1988) for one-stop family shopping were usually open 24 hours a day and, in addition to discount stores, offered bakery goods, deli foods, frozen foods, meat and dairy products, and fresh produce. They also gave space to specialty shops, including “Tire & Lube Expresses, Radio Grill, McDonald’s or Subway restaurants, portrait studios and one-hour photo centers, hair salons, banks, and employment agencies.”⁴

Neighborhood Markets (since 1998) for smaller communities offered items including “fresh produce, deli foods, fresh meat and dairy items, health and beauty aids, one-hour photo and traditional photo developing services, drive-through pharmacies, stationery and paper goods, pet supplies, and household chemicals.”⁵

Sam’s Club (since 1983), a members-only warehouse club, offered large-volume items at low prices mostly to small business owners and families. Some locations featured the latest technology Scan & Go (seamless payment system), Club Pickup, and home delivery service. Sam’s Club offered services including travel, auto buying, pharmacy, optical, hearing aid centers, tire and battery centers, and a portfolio of business operations support services.

Walmart.com had 100 million unique visitors a month and was growing. It also acquired Jet.com, Hayneedle.com (home furnishings), Shoes.com (footwear), Moosejaw (outdoor apparel and gear), ModCloth (women’s apparel), and Bonobos (men’s apparel). Walmart.com featured the Walmart app, Walmart grocery (online order with same day pickup), Easy Reorder, Walmart Pay, Pickup Discount, Free Two-Day Shipping, and Scan & Go (scanning the items with mobile phone to skip the cashiers).

² Z. Kante, “What is Amazon,” 13 March 2019, <https://zackkanter.com/2019/03/13/what-is-amazon/>, 17 March 2019.

³ Ibid.

⁴ <https://corporate.walmart.com/our-story/our-business>, accessed 20 August 2019.

⁵ Ibid.

In addition to retail per se, Walmart was operating its cutting-edge and unrivaled-scale fulfillment centers to access 98% of US customers within two days or less. It also set up Store No. 8 in Silicon Valley—a stand-alone division to innovate and redesign commerce.

Moreover, Walmart International was a division that operated in 26 countries to offer high-quality goods and fresh, nutritious food at everyday low prices.⁶ [See **EXHIBITS 1 and 2.**]

Walmart in China—A Brief History

Walmart entered China in 1996 and opened its first Supercenter and Sam's Club in Shenzhen.⁷ The China operations were established through a joint-venture agreement with a local partner.⁸ China was still isolated from the world, and Walmart found multiple restrictions resulting from local protectionism. Restrictions on foreign ownership, import barriers, cultural differences, and limitations in operating retail stores in certain Chinese cities were only a few of the challenges at the time.

Five years after entering, China joined the World Trade Organization (WTO) and had to ease many of its restrictions. That allowed Walmart to proceed with expansion and open in more cities. Initially, Walmart's only non-Chinese competitor was the French company Carrefour that began operations in China in 1995. The main difference between the two foreign giants was in the way they approached business in China. While Carrefour tried to follow the "Chinese way" of doing business, which meant leveraging relationships⁹ and adapting its business model to the local environment, Walmart persistently tried to apply its American business model.

Initially, Walmart had a presence in major cities such as Shenzhen, Beijing, and Shanghai, expanding to 31 stores by 2003. Between 2003 and 2006, it doubled the number of its stores and expanded geographically with a store in almost 30 cities by 2006. Sales were in excess of USD2bn, making Walmart one of China's 10 largest retailers.¹⁰

By 2017, Walmart operated 424 stores in China (399 Supercenters, 22 Sam's Clubs, and 3 Neighborhood Markets).¹¹

In addition to its physical presence, Walmart had been trying to establish its presence online. In 2011, it acquired Yihodian—a grocery online B2C market—but after realizing that it accounted for less than 2% of China's online spending, while Alibaba's and JD's (Alibaba's biggest competitor) combined sales totaled over 80%, it sold Yihodian and partnered with and acquired stakes in JD.com in 2016.¹²

⁶ <https://corporate.walmart.com/our-story/our-business>, accessed 20 August 2019.

⁷ Shenzhen – Chinese mega city, number one in mainland of "overall economic competitiveness, bordering with Hong Kong, with population of 13,02 million, <http://china-trade-research.hktdc.com/business-news/article/Facts-and-Figures/Shenzhen-Guangdong-City-Information/ff/en/1/1X000000/1X09VT4H.htm>.

⁸ P. T. Bangsberg, "Wal-Mart opens its first stores in China," *joc.com*, 12 August 1996, https://www.joc.com/wal-mart-opens-its-first-stores-china_19960812.html, accessed 17 February 2019.

⁹ K. Hope, "Doing business the Chinese way," *BBC News*, 8 October 2014, <https://www.bbc.com/news/business-29524701>, accessed 17 February 2019.

¹⁰ "Wal-Mart operations in China," *UKEssays*, November 2018, <https://www.ukessays.com/essays/business/wal-mart-operations-in-china.php>, accessed 17 February 2019.

¹¹ Walmart Corporate Website, <https://corporate.walmart.com/our-story/locations/china#/china>, accessed 17 February 2019.

¹² J. Russel, "Walmart sells Yihodian, its Chinese e-commerce marketplace, to Alibaba rival JD.com," *TechCrunch*, 2016, <https://techcrunch.com/2016/06/20/walmart-sells-yihaodian-its-chinese-e-commerce-marketplace-to-alibaba-rival-jd-com/>, accessed 17 February 2019.

New Retail

We hope to see chemical reactions. If we can incubate a type of business model that others have never seen, then we are on the right track,

- Daniel Zhang, Alibaba's CEO

Jack Ma, founder of Alibaba, coined the term “new retail” in 2016 to describe the process of integrating online and offline commerce. Multiple companies including Amazon, Walmart, Tesco, or Target had been trying to integrate online and offline. However, according to B. Ladd: *“Alibaba was the first company to define and aggressively move forward with the complete integration of online, offline, technology and logistics and the first to take all of the assets of their ecosystem: digital payments; logistics; B2C, B2B, D2C, B2B2C; cloud computing and data science; a marketing arm; and investments in brick and mortar environments to create a legitimate ‘New Retail.’”*¹³ [See **EXHIBIT 3.**]

Market Players

In the era of brick-and-mortar retail, Walmart faced competition from local giants and international chains. But local brick-and-mortar retailers like LianHua, HaiHang, and Bubugao, former market leaders, were no longer a threat, as they offered a poor shopping experience, wilted vegetables, and substandard customer service.¹⁴ British Tesco,¹⁵ German Metro,¹⁶ and French Carrefour¹⁷ were considering either pulling out or selling their stakes and infrastructure to local players. Marks & Spencer had already withdrawn from China. “To put it simply, we hadn’t understood what Chinese consumers want,” said one of the M&S China office employees.¹⁸ China’s retail market was expected to grow at a compound annual growth rate of 9% between 2017 and 2021, driven by strong growth of what was already the world’s largest online retail market [see **EXHIBITS 4, 5, 6, 7, and 8**]. The new competition landscape was painted by online giants that were focusing on offline integration,¹⁹ the most prominent of which were Alibaba, JD, and Tencent.

Alibaba

Alibaba defined the retail landscape. It was the biggest competitor for Walmart in China. The company originally started as the Alibaba B2B international sourcing platform and operated a marketplace business model similar to eBay that facilitated sales between third-party buyers and sellers. It later opened Taobao, a B2C and C2C platform to serve Chinese customers, and

¹³ B. Ladd, “The Four Pillars of New Retail,” *Observer*, 24 June 2019, <https://observer.com/2019/06/new-retail-four-pillars-digital-commerce-integration/>, accessed 28 June 2019.

¹⁴ T. Doctoroff, “Alibaba Group’s Hema Supermarkets: The Real Deal With China’s ‘New Retail,’” *Adage.com*, 4 February 2018, <https://adage.com/article/cmo-strategy-columns/alibaba-group-s-hema-supermarkets-real-deal-china-s-retail/312345/>, accessed 3 February 2019.

¹⁵ “Tesco pulls back in China with Vanguard deal,” 20 July 2018, <https://www.scmp.com/business/companies/article/1295503/tesco-pulls-back-china-vanguard-deal>, accessed 3 February 2019.

¹⁶ V. Chan, A. Kirchfeld, and R. Weiss, “Wholesaler Metro Weighs Selling Majority of China Unit,” *Bloomberg*, 31 January 2019, <https://www.bloomberg.com/news/articles/2019-01-31/wholesaler-metro-is-said-to-weigh-selling-majority-of-china-unit>, accessed 3 February 2019.

¹⁷ “Carrefour Sells Control of China Business at a Discount,” *Bloomberg*, 23 June 2019, <https://www.bloomberg.com/news/articles/2019-06-23/suning-com-plans-to-buy-80-of-carrefour-china-for-699-million>, accessed 28 June 2019.

¹⁸ T. Hancock, “Marks and Spencer retreats from mainland China,” *Financial Times*, 1 April 2017, <https://www.ft.com/content/33935a30-161e-11e7-80f4-13e067d5072c>, accessed 28 June 2019.

¹⁹ E. Zhou, “JD.COM PLEDGES TO OPEN 1000 HIGH TECH SUPERMARKETS WITHIN FIVE YEARS,” 23 September 2018, <https://www.mingtiandi.com/real-estate/china-retail-real-estate-news/jd-com-say-it-will-open-1000-7fresh-supermarkets-in-5-years/>, accessed 28 June 2019.

expanded it with AliExpress to serve customers worldwide. For higher-end products, it set up Tmall, which was a B2C platform for well-established brands only. Alibaba also implemented Alipay, a robust payment system. Those were the pillars of Alibaba from which the rest of the company grew.

Alibaba was a search engine, a fast-growing e-commerce platform, a bank, and more²⁰ [see **EXHIBITS 9 and 10**]. In 2014, it was listed on the New York Stock Exchange (NYSE), the largest IPO at the time. Its sales were larger than Walmart's. As an e-commerce giant, Alibaba had its own Amazon, eBay, PayPal, Google, and FedEx under its roof. It leveraged big data from all of them to simultaneously process it with artificial intelligence for better results in retail, finance, risk management, and so on.²¹

Alibaba and New Retail

In 2016, when Alibaba introduced the new retail concept, its share of the total Chinese retail market was 10%, and it dominated online retail with a roughly 75% share. Alibaba's revenue growth was around 50% a year. In 2017, Alibaba acquired the Intime Retail department store chain for USD2.6bn in 2017 as part of its new retail strategy.²² Other alliances and acquisitions included partnerships with L'Oreal, Rimowa (German suitcase), Godiva (Belgium chocolate), New Balance (US sports brand),²³ and Starbucks.²⁴

Alibaba opened Hema stores, where customers could shop online or offline and have the goods delivered to their homes in 30 minutes (for those who lived within 3 km). Hema was a hybrid of shopping experience, restaurant, logistic and distribution center, and data center, and it integrated new products and services, including medicines, flowers, or online bookings for services such as cinema or travel.²⁵

Shoppers at Hema brick-and-mortar stores could scan products with their mobile phones and view the product's reviews, product's certificates, and other information on the Hema app. The app was directly connected to Alipay, which allowed consumers to seamlessly check out and pay by phone. Hema shops also included a dining facility, which was fully served by the app, with robots delivering food directly to the tables.²⁶

According to Alibaba's Investor Day presentation, at the end of 2018, there were 64 Hema stores in 14 cities serving over 10 million customers and achieving 60% of online sales. A well-established Hema store generated revenues of CNY800,000 (USD116,500) a day on average, which was CNY50,000 per square meter annually. The online and offline integration increased the number of orders, basket size, and wallet share. On the back end, by leveraging the Hema app, Alibaba was able to build an accurate customer profile, executed target marketing,

²⁰ M. Lajoie and N. Shearman, "Defining Alibaba," *Wall Street Journal*, 2015, <https://graphics.wsj.com/alibaba/>, accessed 23 February 2019.

²¹ M. Zeng, "Everything Alibaba Does Differently—and Better," www.hbr.org, 21 August 2018, <https://hbr.org/2018/09/alibaba-and-the-future-of-business>, accessed 23 February 2019.

²² P. Liu, X. J. Bai, and J. Jia, "The Accelerating Disruption of China's Economy," *Fortune*, 26 June 2017, <http://fortune.com/2017/06/26/china-alibaba-jack-ma-retail-ecommerce-e-commerce-new/>, accessed 18 February 2019.

²³ D. Ren, "The online shopping giant's new '88 programme' is backed by 50 top global brands, offering exclusive deals and promotions to top members," SCMP, 8 August 2017, <https://www.scmp.com/tech/e-commerce/article/2105950/alibaba-spur-fresh-growth-new-services-partnerships-part-its->, accessed 15 August 2019.

²⁴ S. Delventhal, "How Starbucks Can Profit from Alibaba Alliance," *Investopedia*, 2 August 2018, <https://www.investopedia.com/news/how-starbucks-can-profit-alibaba-alliance/>.

²⁵ Z. Zoo, "Alibaba says New Retail strategy is paying off," SCMP, 29 September 2018, <https://www.scmp.com/tech/enterprises/article/2164651/alibaba-says-new-retail-strategy-paying-hema-shopper-data-shows>, accessed 3 March 2019.

²⁶ U. Saiidi, "Inside Alibaba's new kind of superstore: Robots, apps and overhead conveyor belts," CNBC, 3 September 2018, from <https://www.cnbc.com/2018/08/30/inside-hema-alibabas-new-kind-of-superstore-robots-apps-and-more.html>, accessed 05 March 2019.

improved the efficiency of the supply chain, increased the speed of delivery, and optimized pricing and inventory. The app was supported with multiple technologies such as mobile connections, the retail cloud, and smart hardware.²⁷

JD

JD, listed on NASDAQ, was the second-largest e-commerce company in China after Alibaba.²⁸ Unlike Alibaba or eBay, JD, similar to Amazon, operated marketplace and direct sales providing the goods that were maintained as inventory. JD formed partnerships with Walmart on various e-commerce initiatives. To catch up with Alibaba's Hema and the new retail model, JD initiated its 7Fresh supermarkets and equipped those with smart carts that guided shoppers through the aisles.²⁹

Similar to Hema, the 7Fresh infrastructure allowed for detailed data analytics and customer profiling, among other features. JD launched the project with a 10% stake in Chinese supermarket chain Yonghui Superstores in 2015. The shops targeted first- and second-tier cities and followed the motto of "the best parts of fresh grocery markets and top-quality restaurants with cutting edge e-commerce technology."³⁰

JD focused a great deal on logistics aspects by implementing self-operating trucks, automated warehouses, and unmanned stores. In January 2018, it successfully carried out the first "government approved" delivery-by-drone system that it had been developing for years.³¹

In AI-powered unmanned JD's stores, customers could walk in, pick up any item, and check out via a seamless payment system based on RFID and facial recognition technology. Those shops were already available in China and Indonesia, where JD expanded its online and offline presence, rapidly serving 20 million customers, operating 9 warehouses on 7 islands covering 483 cities. JD was also planning for next-day delivery by increasing the number of its warehouse facilities.³²

Although JD had a presence only in China, Indonesia, Thailand, and Vietnam, its ultimate goal was to beat Alibaba and Amazon in international markets by partnering with Walmart and Google after the latter bought a USD550mn stake in JD. JD's business model looked more like Alibaba's than Amazon's. It utilized its own inventory and let other vendors use the platform, while Alibaba operated as a merchant with a revenue model based on advertising and marketing fees.³³

Tencent

Tencent was an investment company and provided internet value-added services (VAS) such as social networks, online games, advertising, fintech, cloud, TV, and a range of other services

²⁷ Yi Hou, 2018 Investor Day, Alibaba, 2017, https://www.alibabagroup.com/en/ir/presentations/Investor_Day_2018_Hema.pdf, accessed 05 March 2019.

²⁸ L. Sun, "These 3 Chinese Tech Stocks Could Rebound in 2019," 28 November 2018, <https://www.fool.com/investing/2018/11/27/these-3-chinese-tech-stocks-could-rebound-in-2019.aspx>, accessed 15 March 2019.

²⁹ "JD's Unmanned Store Goes International," 13 September 2018, <https://jdcorporateblog.com/jds-unmanned-store-goes-international/>, accessed 15 May 2019.

³⁰ E. Zhou, "JD.com Say It Will Open 1000 7Fresh Supermarkets in 5 Years," 23 September 2018, <https://www.mingtiandi.com/real-estate/china-retail-real-estate-news/jd-com-say-it-will-open-1000-7fresh-supermarkets-in-5-years/>.

³¹ J. Russell, "China's JD.com tests drone delivery in Indonesia in first overseas pilot," TechCrunch, 22 January 2019, <https://techcrunch.com/2019/01/22/jd-drone-indonesia/>, accessed 2 March 2019.

³² "JD's Unmanned Store Goes International."

³³ D. Ramli, E. Newcomer, and T. Metcalf, "JD Turns to Google, Walmart to Build Global E-Commerce Empire," Bloomberg, 29 August 2018, <https://www.bloomberg.com/news/articles/2018-08-28/jd-turns-to-google-walmart-to-build-global-e-commerce-empire>, accessed 4 March 2019.

in B2B and B2C models. It was also strongly involved in e-commerce.³⁴ It was the fourth most valuable internet company in the world after Amazon, Google, and Facebook (11 February 2019).³⁵ Tencent owned the largest messaging app in China, WeChat, which was a substitute for Facebook, WhatsApp, and Twitter with dynamically expanding e-commerce and finance functionalities.³⁶

In 2017, Tencent acquired a stake in Super Species, a modern retail unit of Yonghui Supermarkets, China's largest supermarket chain operator. In 2018, it invested in Vipshop, the third-largest e-commerce player in China. It also owned a 20% stake in JD.³⁷

Tencent also bought a stake in Carrefour and launched the smart supermarket Le Marche in Shanghai in cooperation with the French retail giant. Unlike Hema, which used Alibaba's Alipay to process payments, Tencent shops employed Tencent's WeChat payment system.³⁸

Tencent was involved in various industries other than retail, and its revenue was trending up year by year [see **EXHIBITS 11 and 12**].

Pinduoduo

Online retail platform that offered buyers discounts for buying in groups and sharing purchases via WeChat. Unlike Alibaba and JD, it initially focused on rural customers rather than the urban middle class. That approach proved successful and tapped on an emerging customer base. The model was soon noticed and adopted by Alibaba and JD. By the end of June 2019, Pinduoduo had 483.2 million active buyers against Alibaba's 674 million and JD.com 321.3 million annual active customer accounts. Analysts attributed its success to its different business model. Since both Alibaba and JD recognized the opportunities in the less-developed areas, Pinduoduo was facing strong competition.

Customer Profile

Half of Chinese consumers shopped online on a weekly basis compared to the global average of 22%. The percentage of Chinese who were likely to purchase groceries was 59% compared to an average of 21% globally. In general, Chinese consumers were more open to innovations including mobile payments (86% vs. 24% global average) or delivery of goods by drones (44% vs. 22%). They were also more open to sharing personal data in order to have their offers customized (67% vs. 42%).³⁹

PwC divided Chinese customers into three groups. Innovators (ferocious consumers), fast followers, and laggards. [see **EXHIBIT 13**]. The personas across each group varied. The innovators' group, for instance, includes the following three personas:⁴⁰

³⁴ TENCENT (0700.HK) Company Profile & Facts, 1 August 2019), <https://finance.yahoo.com/quote/0700.HK/profile?p=0700.HK>, accessed 8 August 2019.

³⁵ "What is Tencent? Profiling China's largest social media conglomerate," Business Hub, 11 February 2019, <https://www.ns-businesshub.com/transport/what-is-tencent/>, accessed 4 March 2019.




³⁶ A. Farhoomand, P. Lowry, and F. Ziolek, "Facebook: Facing Off Against Tencent," hbr.org, 20 June 2017, <https://hbr.org/product/facebook-facing-off-against-tencent/HK1103-PDF-ENG>, accessed 4 March 2019).

³⁷ E. Yoo, "Tencent Shows Off Their Vision for the Future of Retail," *Jing Daily*, 5 April 2018, <https://jingdaily.com/tencent-retail/>, accessed 3 March 2019.

³⁸ E. Zhou, "JD.com Say It Will Open 1000 7Fresh Supermarkets in 5 Years," 23 September 2018, <https://www.mingtiandi.com/real-estate/china-retail-real-estate-news/jd-com-say-it-will-open-1000-7fresh-supermarkets-in-5-years/>, accessed 15 May 2019.

³⁹ S. Yu, Y. Yang, B. Goh, "China's online retailers take the battle to the hinterlands", Reuters, November 1, 2019, <https://news.yahoo.com/chinas-online-retailers-battle-hinterlands-050207150.html>, accessed 7 November 2019.

⁴⁰ T. Birtwhistle, "China's next retail's disruption," PwC, 2018, <https://www.pwccn.com/en/retail-and-consumer/publications/global-consumer-insights-survey-2018-china-report.pdf>, accessed 28 March 2019.

		
<p>Sophia The Wellness Explorer A single, 28-year old office lady with college education, living in Guangzhou, with around RMB 16,000 (USD 2,000) monthly disposable income interested in running, outdoors, healthy eating and sporty lifestyle.</p>	<p>The Sassy Modern New Mom A 29-year old Shanghaiese finance manager, with around RMB24,000 (USD 3,000) household disposable income, married with a newborn, interested in family outings and trips. She was also interested in interior design to decorate her new dream home.</p>	<p>The Post 90s Trendsetter A 20-year old single student studying in Shenzhen, interested in online shopping, fashion, music, food and weekend trips.</p>

A more general profile of Chinese consumers was proposed by Alibaba based on data from millions of transactions in its Hema stores:⁴¹

<p>Young Adventurer, 28, whose purchases were driven by promotions and prefers products recommended by celebrities.</p>	<p>Working Couple, mid-30s, look for a balance between health and convenience.</p>	<p>Affluent Middle-class, 36, with strong influence on senior family members with regards to fresh food consumption, prefers high-quality packaged goods.</p>	<p>Exquisite Sohoer, 43, likes upgrades and prefers imported products.</p>	<p>Fashionable Senior, 52, cares about convenience and cost and is open to novelties.</p>
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There was one more group of customers that many businesses and analysts underestimated—China's silver generation. Mainstream discussions focused on millennials, leaving over one-third of the entire country's population, still growing, unnoticed. According to research, 8% of elderly Chinese felt they were not properly targeted. The digitally savvy older generation was

⁴¹ INVESTOR DAY, 2018, <https://www.alibabagroup.com/en/ir/investorday>, accessed 28 March 2019.

waiting for more opportunities to interact with and spend on brands and retailers that would make some effort to cater to their generation.⁴²

In the third and fourth quarter of 2017, China's consumer confidence index (CCI), at 114 (a record high), was trending up. A high CCI and disposable income growth of 7.5% promised steady demand and consumption. A CCI above 100 indicated positive customer confidence. Spending went up 43% compared to five years earlier in China. In comparison, spending in the US and globally went up 24% and 33%, respectively.⁴³

Chinese consumers were also open to new technologies [see **EXHIBIT 14**] and welcomed online and offline integration and the new retail concept [see **EXHIBIT 15**]. They were also much more advanced in technology-supported shopping compared to customers in other parts of the world [see **EXHIBITS 16 and 17**].

Although the spending trends were similar in the West, they happened much faster in China. For instance, 52% of Chinese increased their spending on experiences compared to 26% in the US. The range of experiences the Chinese chose was also wider compared to American choices—culinary classes (40% vs. 7%), self-improvement/education (34% vs. 17%).⁴⁴

Lessons Learned

In a short span of a few decades, China underwent a gargantuan socioeconomic transformation. Whereas in the old days, everyone strove to own a radio, a bicycle, a sewing machine, or a simple wristwatch, a few decades later, they wanted a car, a luxury apartment, overseas vacations, and limited-edition luxury watches.⁴⁵

As China switched from an isolated state to an open economy, many international companies began entering the market. These companies found themselves in a new culture with an unpredictable and dynamic landscape.

Positioning

The everyday low price strategy (Walmart's distinctive feature and competitive advantage in the US market) was not successful in China because foreign companies were supposed to be higher-quality alternatives to their local counterparts. Walmart China prices gradually went up and were reported to be higher than those of the local competition—completely opposite of what Walmart traditionally stood for.⁴⁶

Chinese Consumers' Diversity

Shanghai, Beijing, Shenzhen, or Guangzhou, the biggest and first cities where Walmart opened its stores, were home to 9% (2015) of the Chinese population. They were called first-tier cities. Second- and third-tier cities were next on the agenda. According to a McKinsey report,

⁴² P. Yan, "Unlocking the potential of China's Silver Generation," 25 March 2019, https://mp.weixin.qq.com/s/DDpLJjkJU0B_BtEGyNUMZw, accessed 4 March 2019.

⁴³ V. Bali, "5 Things We Can Learn From China's E-commerce Explosion," Nielsen, 2 January 2018, <https://www.nielsen.com/cn/en/insights/news/2018/5-things-we-can-learn-from-chinas-e-commerce-explosion.html>, accessed 4 May 2019.

⁴⁴ T. Birtwhistle, "China's next retail's disruption."

⁴⁵ J. FlorCruz, "Looking back over Chinas last 30 years," *CNN World*, 19 December 2008), <http://edition.cnn.com/2008/WORLD/asiapcf/12/18/china.reform.florcruz/index.html>, accessed 19 February 2019.

⁴⁶ "Lessons from Walmart's 18 years in China," mbrain, 7 May 2015, <https://www.m-brain.com/insights/geographies/asia-greater-china/lessons-from-walmarts-18-years-in-china/>, accessed 19 February 2019.

Cities in China were grouped into four tiers based on their economic development and political importance. Tier-one cities were Beijing, Shanghai, Guangzhou, and Shenzhen. Tier-two cities were mainly provincial capitals plus a few other major urban areas. Tier-three cities had a nominal GDP of RMB22 billion–120 billion in 2010. Tier-four cities had less than RMB22 billion GDP in 2010.⁴⁷

Those who looked at China from Beijing's or Shanghai's perspective had a distorted view of reality. Wealth was unequally distributed, with first-tier cities on top, coastal cities second, while western regions slowly increased in importance.⁴⁸

The lesson that Walmart and other successful companies learned was to structure their offerings by region and then by city tiers. Such an approach fit the offerings to particular customers' income, class, and culture.⁴⁹ Although Walmart preferred the unified purchasing model⁵⁰ (which also ensured the buyers' bargaining power), it learned that the diversity of the customers required reorganization of its offerings.⁵¹ KFC, for example, offered spicy powder with burgers in Sichuan and herbal tea in Guangdong province. In fashion, the adjustments were made based on weather trends in various provinces.

Clustering

The further complexity of regionalization and catering to particular city tiers brought about the approach of "clustering." Besides urban clusters, there were four megacities (Beijing, Shanghai, Guangzhou, Shenzhen), and some brands put more focus on those for entering the market, as success there had an impact on success in other areas.

Companies that understood the clustering concept learned to use it to their advantage. Still, they had to figure out how to improve supply chains in order to maximize penetration and minimize wastage within clusters.⁵²

McDonald's, for example, with over 2,500 stores, had large premium stores conceptualized as "Future 2.0" usually in tier-1 cities and regular stores elsewhere. Decathlon built 4,000-sqm stores in tier-1 cities but simpler 1,500-sqm stores in other areas.

Laws and Regulations

Chinese law was written and interpreted as a guideline by a local regulator.

The new economy in China called for changes in legislation. Fresh ideas, business models, and political and commercial disputes created an environment in which the legal system was constantly evolving. The unpredictable changes in legislation turned winners into losers and losers into winners overnight, causing many international companies to withdraw from the Chinese market.

⁴⁷ Richard Dobbs et al., "China's E-tail Revolution: Online Shopping as a Catalyst for Growth," McKinsey Global Institute, March 2013.

⁴⁸ A. F. McMillan, "The Rise of China 2nd and 3rd Tier Cities," CNBC, 4 February 2011, <https://www.cnbc.com/id/41420632>, accessed 19 February 2019.

⁴⁹ "Lessons from Walmart's 18 years in China," mbrain.

⁵⁰ J. Huang and Y. Jia, "'Wal-Mart' Development in Chinese Market: Problems and Countermeasures – Based on the Enterprise Culture and Ethics," CSCanada, 30 April 2015, http://www.cscanada.net/index.php/ibm/article/viewFile/6806/pdf_132, accessed 20 February 2019.

⁵¹ M. L. Chuang, J. J. Donegan, M. W. Ganon, and K. Wei., "Walmart and Carrefour experiences in China: resolving the structural paradox," *Cross Cultural Management: An International Journal* 18, no. 4 (2011): 443–463, <https://doi.org/10.1108>, accessed 17 February 2019.

⁵² T. Birtwhistle, "China's next retail's disruption."

The lesson that foreign companies learned was to be ready for swift changes in rapidly evolving legislation and all the possible interpretations of the seemingly same rules and regulations that could differ on national and local levels. They also learned that what was sometimes a minor misdemeanor for local companies turned out to be a major scandal for the international entities.⁵³

As a consequence of what was believed to be a misinterpretation, Walmart had to close 13 stores for two weeks after local authorities pronounced its pork products as mislabeled.⁵⁴

Economic Infrastructure

A superbly efficient supply chain was one of Walmart's biggest strengths at home. In China, however, lack of a technological and physical infrastructure outside of major cities hampered the company's supply chain,⁵⁵ partners,⁵⁶ and efficient monitoring and communication between its suppliers.

China was a country where standards were nonexistent or rudimentary. When Walmart came in with its operation manuals that precisely defined standards and procedures, the suppliers were overwhelmed and unprepared to follow them, causing friction and delays. Moreover, Walmart used "back-casting"⁵⁷ instead of forecasting to assess the commodity price; local suppliers were not used to being charged back costs and did not like the situation, as it further tightened their profits. To avoid back charges, the suppliers delayed deliveries, which impeded Walmart's daily operations,⁵⁸ thus diluting its bargaining power. Walmart was not the biggest chain in China, and suppliers did not have to yield to Walmart's whims and requirements.

Management Culture

At home, Walmart was famous for its corporate culture. Coming to China and attempting to copy the corporate culture in an entirely different culture, however, was not successful. Incentive mechanisms that worked in the United States had little impact on staff in China. Moreover, to lower costs, at some point Walmart China only employed 20% of its staff full-time. That further minimized any sense of belonging or willingness to be a part of the Walmart corporate culture. Managing its staff in a culture fundamentally different from the West taught Walmart that culture could not be copied and pasted. Walmart had to build its local culture from the scratch through analyzing local employees' needs and behaviors, writing new manuals, and developing new standards, processes, and incentive programs.⁵⁹

Acquisitions & Partnerships

"They have found a clever way to leverage someone else's network to help them sell things online, and it's easier to jump on the back of JD.com," said Chan Wai-Chan, a senior partner at Oliver Wyman's Asia Pacific consumer practice.⁶⁰

⁵³ Ibid.

⁵⁴ "Walmart stores closed in China after pork probe," BBC, 10 October 2011, <https://www.bbc.co.uk/news/business-15245029>, accessed 28 March 2019.

⁵⁵ R. Salomon, "Here's Why Walmart Stumbled on The Road to China," *Fortune*, 21 February 2016, <http://fortune.com/2016/02/21/why-walmart-stumbled-on-road-to-china/>, accessed 24 February 2019.

⁵⁶ M. L. Chuang et al., "Walmart and Carrefour experiences in China: resolving the structural paradox."

⁵⁷ D. Bruce Merrifield Jr. "Amazon (AMZ) Backcasting Strategies," 12 April 2018, <https://www.linkedin.com/pulse/amazon-amz-backcasting-strategies-d-bruce-merrifield-jr-/>, accessed 17 February 2019.

⁵⁸ J. Huang and Y. Jia, "'Wal-Mart' Development in Chinese Market: Problems and Countermeasures."

⁵⁹ Ibid.

⁶⁰ R. Chang and S. Pettypiece, "Wal-Mart's China Revival Strategy Calls in JD.com and Its Drones," 20 October 2016, <https://www.businessoffashion.com/articles/news-analysis/wal-marts-china-revival-strategy-calls-in-jd-com-and-its-drones>, accessed 28 February 2019.

Partnerships were crucial in China, no matter what business one was in. It was hard to make correct decisions about whom to partner with. When things went wrong, an immediate change of partner might be necessary, which required speed and flexibility on the part of the company. When Walmart found itself in an unsuccessful partnership with Yihodian, it managed to quickly find a new partner in JD, a leading online platform. The new partnership allowed Walmart to leverage on the JD.com network and enter the online space.

Payment Systems

China's digital payment systems were dominated by WeChat Pay and Alipay [see **Exhibit 22**]. Walmart formed a partnership with Alipay in 2015 and ended it in 2018 when it partnered with WeChat for payment, big data analysis, and precise marketing. The connection between WeChat and Walmart was quite deep, as Tencent (WeChat's owner) also owned 21% in JD. By entering the partnership with WeChat Pay, Walmart appeared to be on Tencent's road map to digital smart retail.

New Retail Logistics

Over the years, Walmart struggled with traditional logistics issues for reasons ranging from poor infrastructure through mishandling suppliers to issues with IT, costs, and manpower. Walmart could not handle the logistics for new retail on its own. The partnership with JD and Tencent and further injection of USD320mn, of a USD500mn total investment, into Dada JD Daojia, which was a merger of JD.com's online-to-offline business and Dada Nexus (large Chinese crowd delivery platform), would help Walmart enhance its integrated online and offline experience.⁶¹

Anticipating the future, Walmart entered the self-driving cars delivery platform. It partnered with Waymo—a division of Alphabet/Google's parent company—for a pilot delivery program in Arizona and Miami, Florida,⁶² and formed a new partnership with Baidu—a search engine referred to as the Google of China for the Apollo self-driving platform that was used by 136 carmakers worldwide.⁶³ Walmart recently announced a further investment of USD1.2bn in distribution centers in the coming 20 years.⁶⁴

Leadership in China

How to be effective in China is very different from how to be effective here (in the US).

- Maggie Sans, former senior vice president and chief corporate affairs officer,
Walmart China

Walmart senior vice president Maggie Sans was surprised by how things worked in China compared to the West. She dealt with maintaining good relationships in the communities; engaging with nonprofits, government leaders, and the media; and was involved in setting standards and obeying the law. The aim of her department in various countries was to keep standards worldwide as similar as possible. When coming to China, she was to use her core capabilities and competencies in corporate affairs. However, learning how to apply those

⁶¹ A. Tozer, "What Walmart and JD.com's Latest Investment Means for Chinese Retail," *Fortune*, 9 August 2018, <http://fortune.com/2018/08/09/walmart-dada-jd-daojia/>, accessed 28 February 2019.

⁶² S. Pham, "China's Baidu will help deliver Walmart groceries in self-driving vans," CNN, 9 January 2019, <https://edition.cnn.com/2019/01/09/tech/baidu-walmart-udelv/index.html>, accessed 28 February 2019.

⁶³ S. Writer, "Baidu's driverless tech to power Walmart delivery: CES 2019," 9 January 2019, <https://asia.nikkei.com/Business/China-tech/Baidu-s-driverless-tech-to-power-Walmart-delivery-CES-2019>, accessed 28 February 2019.

⁶⁴ L. He, "Walmart is investing \$1.2 billion in China," CNN, 4 July 2019, <https://edition.cnn.com/2019/07/02/business/walmart-china-investment/index.html>, accessed 8 July 2019.

capabilities in the Chinese context was a subject that Sans was learning the entire time of her stay in China.⁶⁵

One of the differences was the institutional environment in China (half market, half government). Western managers had to learn the rules behind the rules. Managers had to go beyond their companies to get acquainted with the political world. While, in the US, legal problems would be solved by the company lawyer, in China, the CEO often had to step in and deal with the government.

Another difference was rooted in the culture and values of Chinese society. For example, managing employees through a direct approach and frank comments was too strong an approach for Chinese, who lived with an deeply embedded value of “not losing face.” Adjusting to such cultural traits was challenging for outsiders and required a months-long learning curve.⁶⁶

Walmart's New Retail Strategy

It was reported, although Walmart declined to comment, that Walmart was projecting USD1bn losses for US e-commerce in 2019. Walmart accounted for 4.7% of online sales in the US. For comparison, Amazon accounted for nearly 38% sales in the same market and operated a much larger inventory and distribution network. Walmart US planned a number of strategies to bridge the gap between its strongest competitor, such as developing infrastructure, increasing inventory, speeding up delivery, incubating its own brands, and selling the newly acquired ones that turned unprofitable. It would also focus on developing a “load up customers’ fridge” service⁶⁷ and holding it as a unique value proposition against Amazon. Walmart was partly hoping the new, distinctive service would save Walmart from the necessity of building an “everything store.” All that ideas and initiatives, however, would require substantial investment.⁶⁸

Meanwhile in China, new retail required integration of online and offline aspects in order to enrich the customer experience. According to the local media reports, Walmart was considering repositioning its online and offline presence. It began closing more hypermarket stores. According to analysts Walmart had the following reasons for doing so: (1) its low price advantage was no longer relevant in e-commerce and new retail, and the operating costs were high, (2) Walmart’s initially long-term low-cost rents came to an end and rental prices started to soar, (3) the number of shopping malls increased substantially in China, with supermarkets moving in.

To further deepen its online-to-offline integration, Walmart based its strategy on key partnerships such as with [JD.com](https://www.jd.com) to enter the online space. The partnership also let Walmart enjoy the benefit of the WeChat payment systems online. In its physical stores, it adopted the WeChat Scan-and-Go system, which allowed customers to skip long lines at the cashier. To

⁶⁵ S. Rand, “How Walmart does business in China,” 22 May 2017, <https://nrf.com/blog/how-walmart-does-business-china>, accessed 5 March 2019.

⁶⁶ D. Barton, “Developing China's business leaders: A conversation with Yingyi Qian,” McKinsey, July 2013, <https://www.mckinsey.com/featured-insights/leadership/developing-chinas-business-leaders>, accessed 5 May 2019.

⁶⁷ Walmart’s idea was to send its employees to customers’ homes to load the fridge with the purchased items.

⁶⁸ J. D. Rey, “Inside the conflict at Walmart that's threatening its high-stakes race with Amazon,” 3 July 2019, <https://www.vox.com/recode/2019/7/3/18716431/walmart-jet-marc-lore-modcloth-amazon-ecommerce-losses-online-sales>, 7 July 2019.

address localization and branding issue, Walmart developed its Great Value and Marketside brands in China.⁶⁹

As an innovator, Walmart had just launched the Blockchain Traceability Platform, which allowed consumers to trace products' sources, logistics, and testing results.⁷⁰ It was suggested that in the future, it could integrate its drive-through pickup through WeChat or create WeChat membership programs.

Next Step

Walmart was battling Alibaba and Amazon for online-to-offline supremacy in China and globally. It was relying on JD in China and Indonesia, and was hoping to partner with Uber and similar platforms to fulfill home deliveries in the US.⁷¹

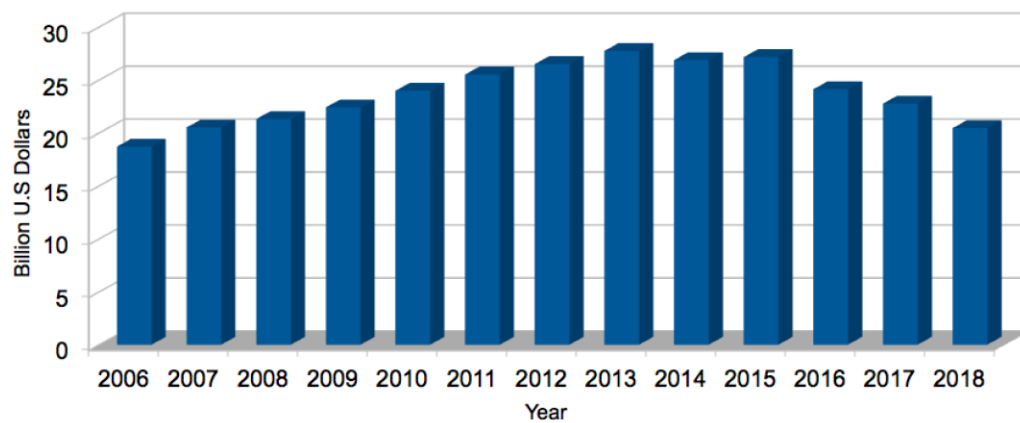
The three trends—the rise of middle-upper class, the emergence of a new generation, and the growing role of e-commerce in China⁷²—required agile growth strategies. Consumer engagement with brands was increasingly becoming an important factor in the retail market. Walmart had to focus on its online presence merged with high-tech stores and supported by seamless logistics to account for its last-mile delivery service. What partnership could it enter? What leverage did Walmart still have to keep up with Alibaba and Amazon? What were Walmart's biggest weaknesses in the new retail model? What aspects of e-commerce did Walmart miss in planning and executing its strategy? Most importantly, would Chinese customers continue shopping at Walmart?

⁶⁹ "Walmart China Closes Hypermarkets, Expands Online Shopping and Delivery Service," 4 September 2018, <https://www.producereport.com/article/walmart-china-closes-hypermarkets-expands-online-shopping-delivery-service>, accessed 05 March 2019.

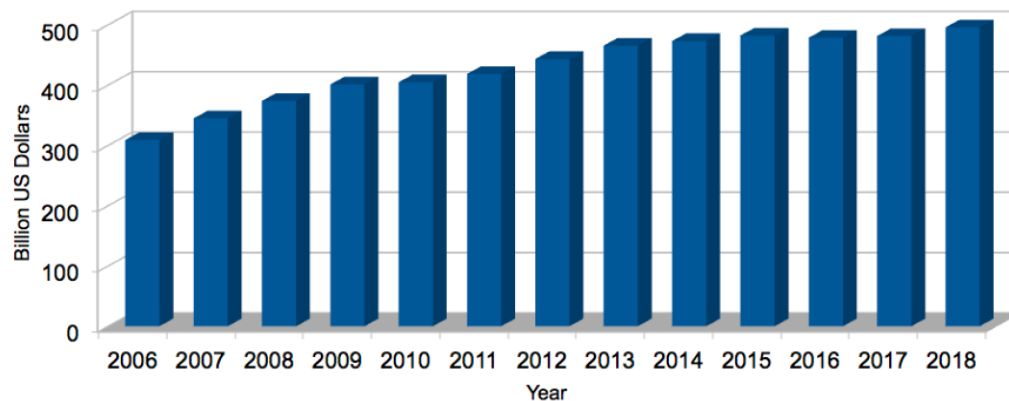
⁷⁰ 陈柳兵. "Walmart China launches blockchain platform to help shoppers track products," *China Daily*, 26 June 2019, <http://www.chinadaily.com.cn/a/201906/26/WS5d130a01a3103dbf1432a5e3.html>, accessed 5 July 2019.

⁷¹ D. Siekman, "Walmart China Emphasizes Fresh Goods and Ecommerce for 2018," 4 September 2018, <https://www.producereport.com/article/walmart-china-emphasizes-fresh-goods-ecommerce-2018>, 5 March 2019.

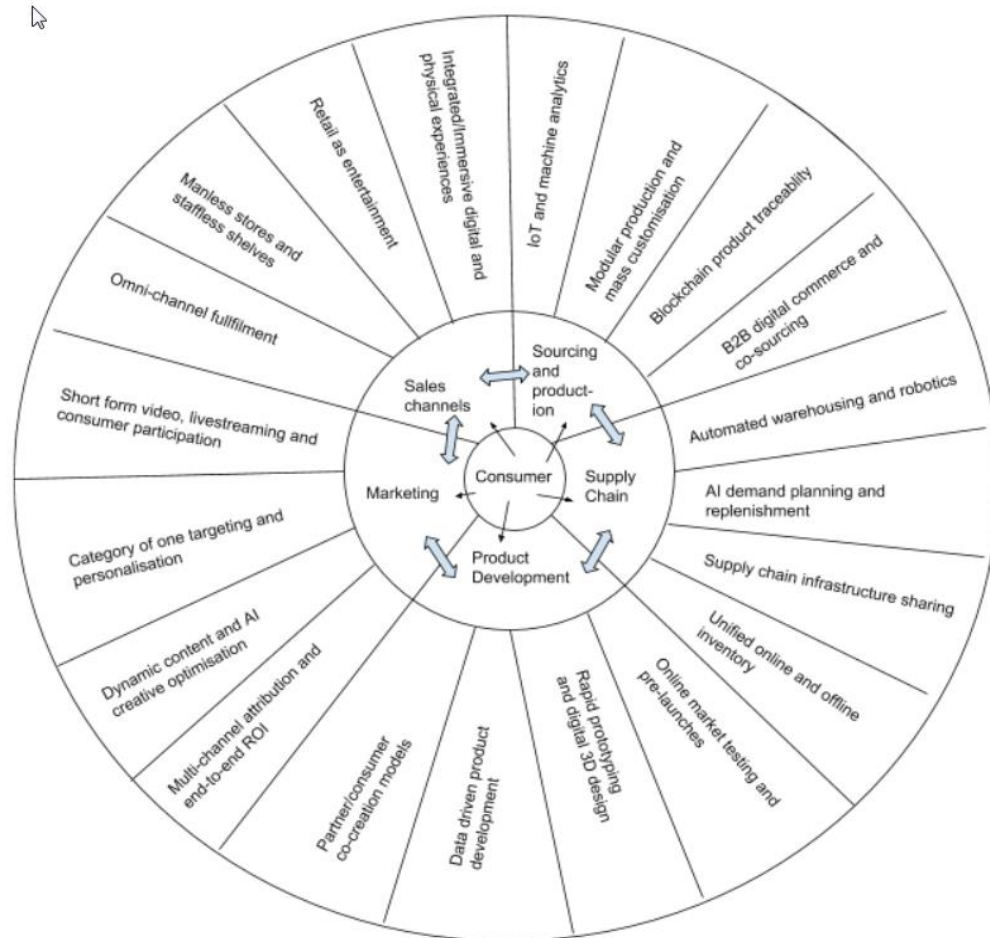
⁷² Y. Kuo, "3 great forces changing China's consumer market," 4 January 2016, <https://www.weforum.org/agenda/2016/01/3-great-forces-changing-chinas-consumer-market/>, accessed 5 March 2019.

EXHIBIT 1: WALMART'S OPERATING INCOME (WORLDWIDE)

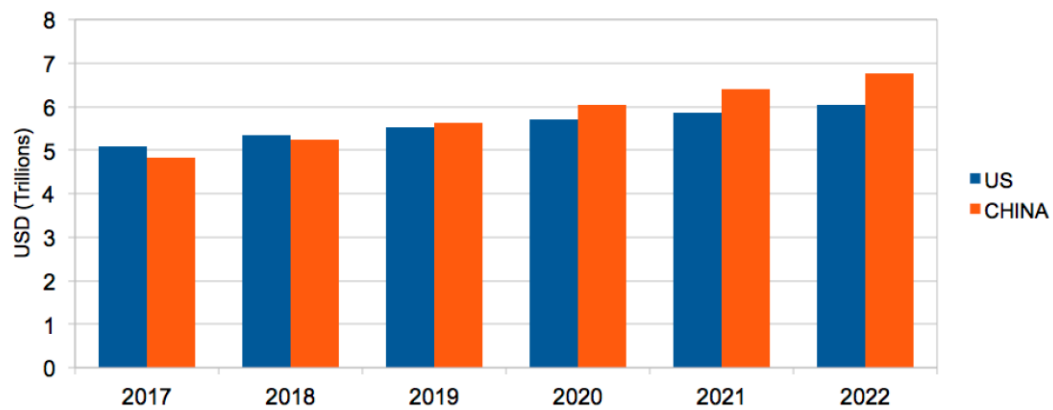
Source: Graph adapted from <https://www.statista.com/statistics/185333/walmarts-operating-income-worldwide-since-2006/>.

EXHIBIT 2 WALMART'S NET SALES WORLDWIDE

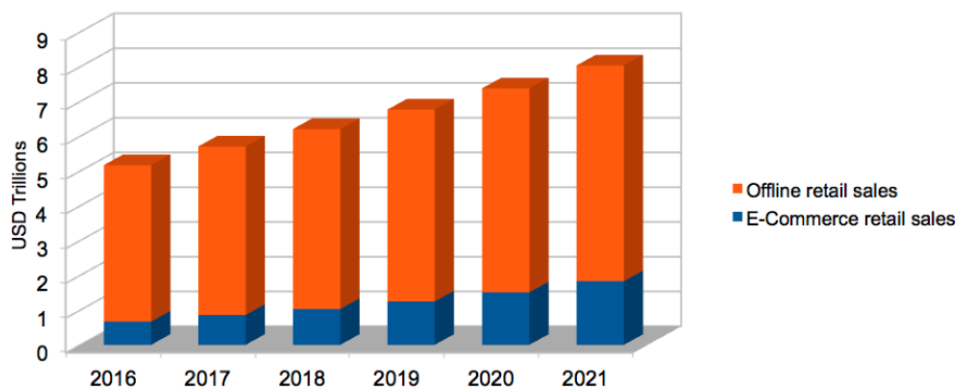
Source: Graph adapted from <https://www.statista.com/statistics/183399/walmarts-net-sales-worldwide-since-2006/>.

EXHIBIT 3: NEW RETAIL

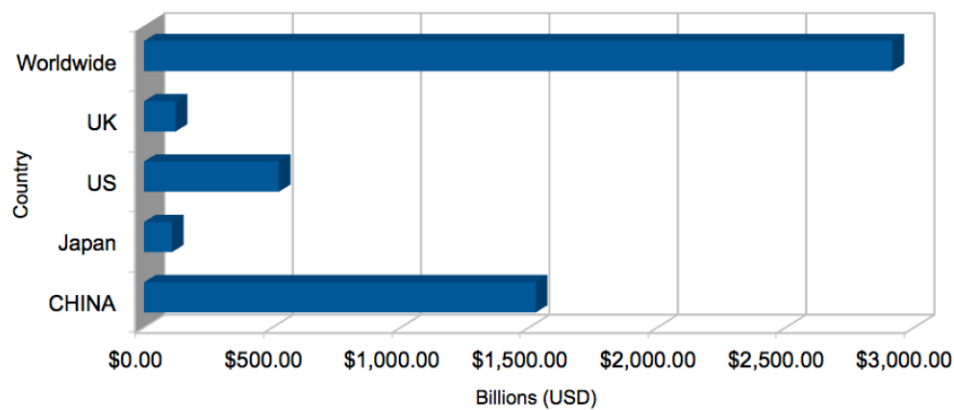
Source: Graph adapted from <https://www.pwccn.com/en/retail-and-consumer/publications/global-consumer-insights-survey-2018-china-report.pdf>.

EXHIBIT 4: TOTAL RETAILS SALES IN CHINA AND THE US

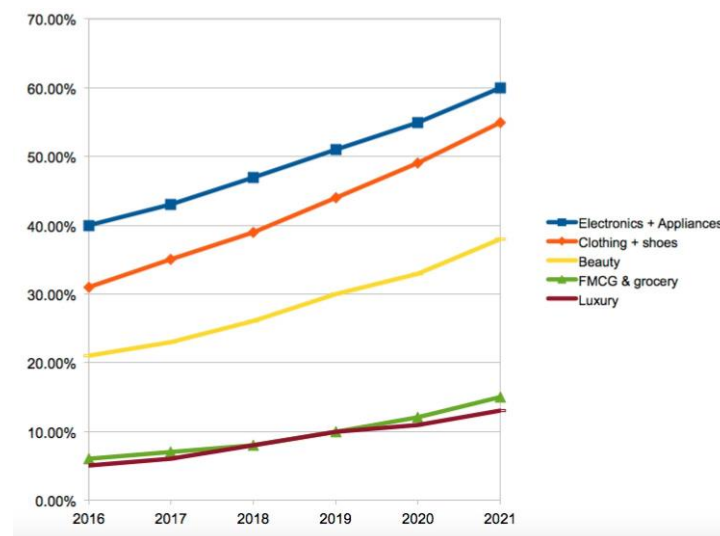
Source: Graph adapted from <http://www.chandlernguyen.com/blog/2019/02/16/retail-e-commerce-in-china-key-facts-and-trends/>.

EXHIBIT 5: CHINA'S RETAIL MARKET OUTLOOK

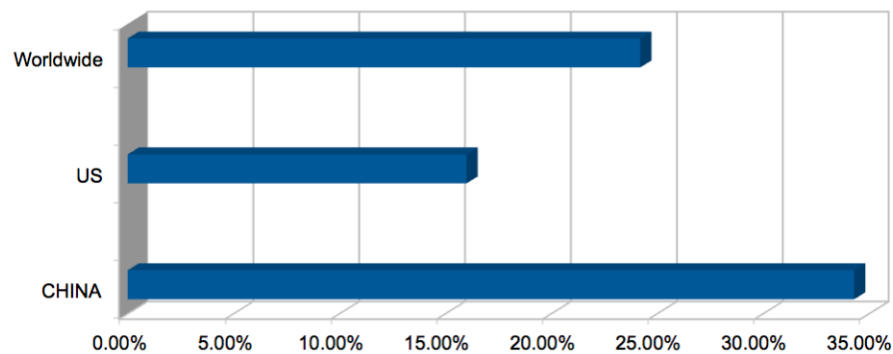
Source: Graph adapted from <https://www.pwccn.com/en/retail-and-consumer/publications/global-consumer-insights-survey-2018-china-report.pdf>.

EXHIBIT 6: RETAIL E-COMMERCE SALES BY COUNTRY (2018)

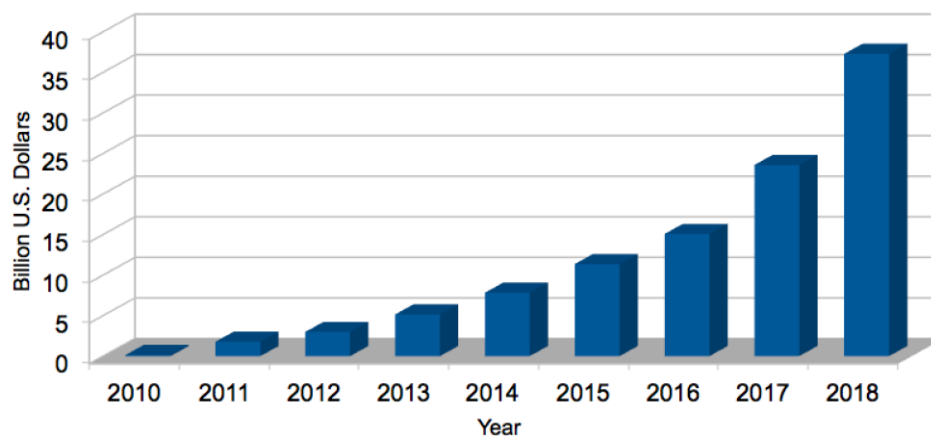
Source: Graph adapted from <http://www.chandlernguyen.com/blog/2019/02/16/retail-e-commerce-in-china-key-facts-and-trends/>.

EXHIBIT 7: CHINA'S E-COMMERCE PENETRATION BY CATEGORY

Source: Graph adapted from <https://www.pwccn.com/en/retail-and-consumer/publications/global-consumer-insights-survey-2018-china-report.pdf>.

EXHIBIT 8: RETAIL E-COMMERCE SALES GROWTH BY COUNTRY, 2018, % CHANGE

Source: Graph adapted from <http://www.chandlernguyen.com/blog/2019/02/16/retail-e-commerce-in-china-key-facts-and-trends/>.

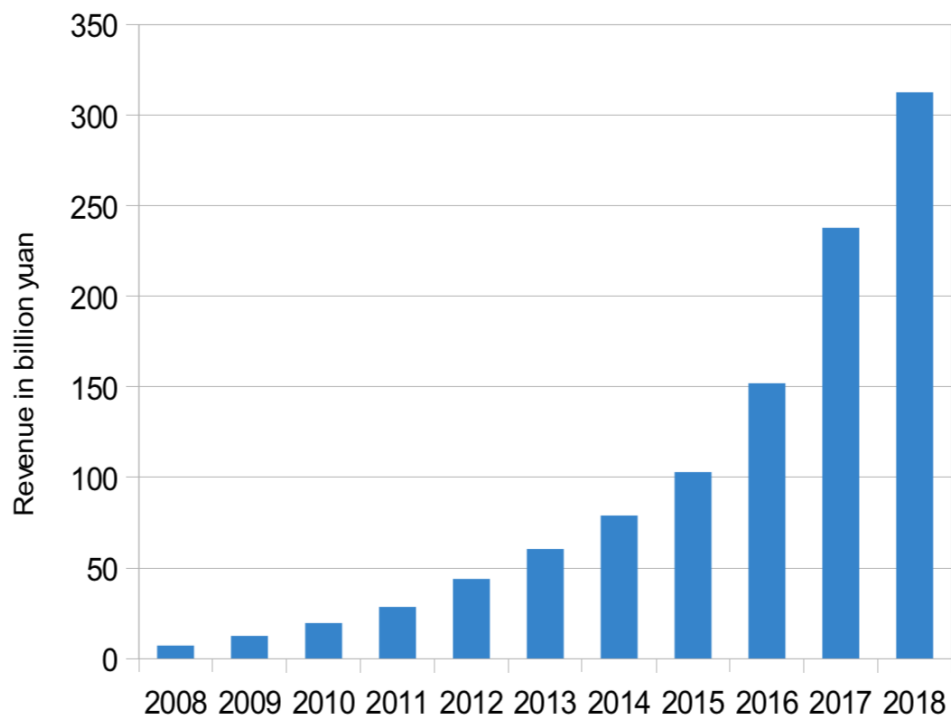
EXHIBIT 9: ANNUAL REVENUE OF ALIBABA GROUP

Source: Graph adapted from <https://www.statista.com/statistics/225614/net-revenue-of-alibaba/>.

EXHIBIT 10: ALIBABA'S MAJOR BUSINESS AT A GLANCE

<p>Chinese Retail Marketplaces</p> <ul style="list-style-type: none"> - Taobao Marketplace - Tmall - Rural Taobao 	<p>Digital Media and Entertainment</p> <ul style="list-style-type: none"> - Youku Tudou (online video) - Alibaba Pictures - Alibaba Music - Alibaba Sports - UC (mobile browser)
<p>Cross-Border and Global Marketplaces</p> <ul style="list-style-type: none"> - AliExpress - Tmall Global - Lazada 	<p>Finance</p> <ul style="list-style-type: none"> - Ant Financial (includes Alipay) - MYbank
<p>Wholesale Commerce</p> <ul style="list-style-type: none"> - 1688.com (China) - Alibaba.com (global) 	<p>Other Services</p> <ul style="list-style-type: none"> - AutoNavi (mapping and navigation) - Koubei (local services) - Ele.me (delivery)
<p>Logistics</p> <ul style="list-style-type: none"> - Cainiao Network 	<p>Cloud Computing</p> <ul style="list-style-type: none"> - Alibaba Cloud

Source: A. Koty, "China to be World's Largest Retail Market in 2019," *China Briefing*, 6 February 2019, <https://www.china-briefing.com/news/china-worlds-largest-retail-market-2019/>, accessed 26 June 2019.

EXHIBIT 11: ANNUAL REVENUE OF TENCENT HOLDINGS

Source: Graph adapted from <https://www.statista.com/statistics/223649/revenue-of-tencent-holdings-since-2007/>.

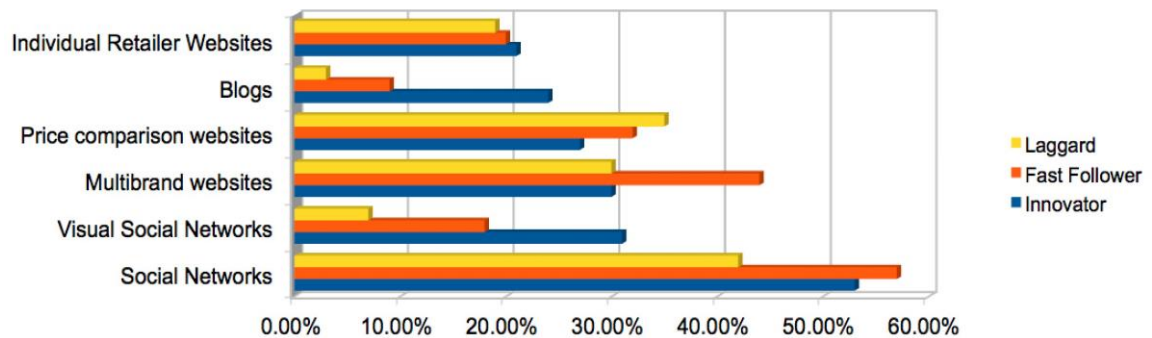
EXHIBIT 12: TENCENT HOLDINGS' MAJOR BUSINESSES

Social Networks - QQ - WeChat - Qzone	Payment - Tenpay - WeChat Pay - QQ Wallet
Entertainment - Tencent Games - China Reading Limited - Tencent Comic - Tencent pictures - Tencent Music Entertainment Group - QQ Music - Penguin e-Sports - NOW Live - Interest Tribe - Tencent Classroom - Nextradio	Utilities - YingYongBao - QQ Browser - Tencent Mobile Manager - Tencent PC Manager - Tencent Map - QQ Mall - Pitu - Tencent Questionnaire - Tucao
Artificial Intelligence - Tencent AI Lab - Tencent YouTu Lab	Platforms - Tencent Open Platform - Tencent Cloud
Information - QQ.com - Tencent News - Tencent Video - Tencent Microblog	

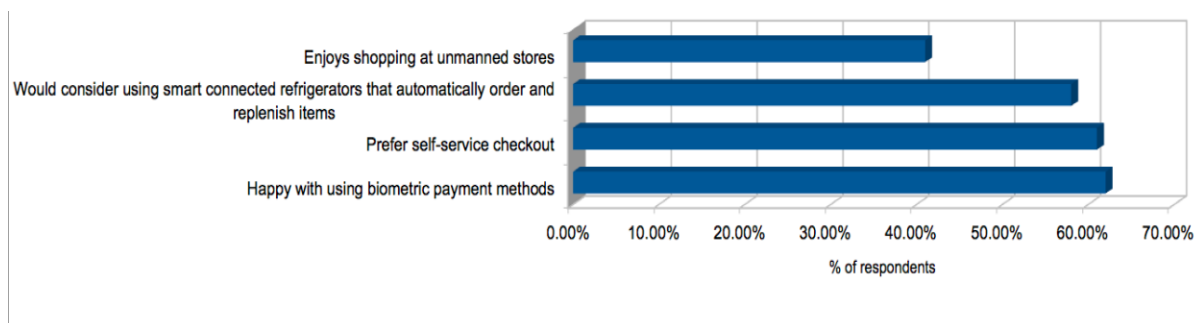
Source: Tencent, Social Network, 2019, <https://www.tencent.com/en-us/system.html>, accessed 26 June 2019.

EXHIBIT 13: THREE GROUPS OF CUSTOMERS AS DEFINED BY PWC

What online media do you regularly use to find inspiration for your purchases?

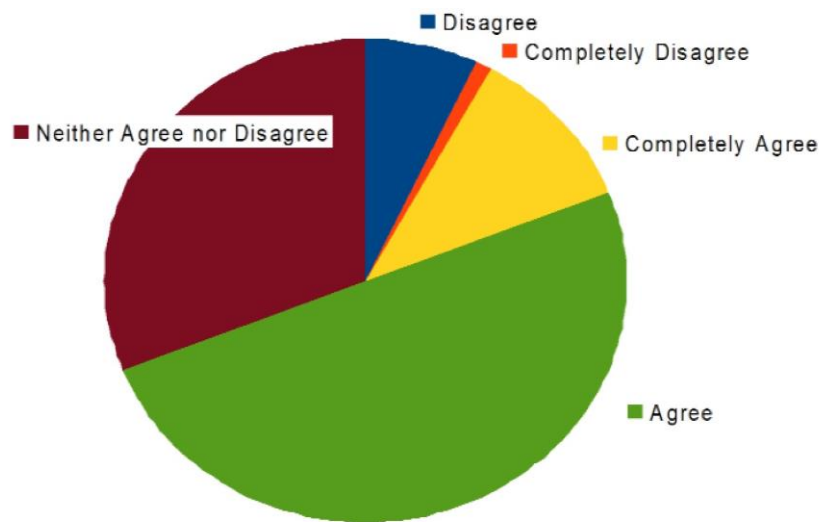


Source: Graph adapted from <https://www.pwccn.com/en/retail-and-consumer/publications/global-consumer-insights-survey-2018-china-report.pdf>.

EXHIBIT 14: ATTITUDES OF URBAN DIGITAL BUYERS IN CHINA TOWARD SELECTED RETAIL TECHNOLOGIES/ INTERNET OF THINGS

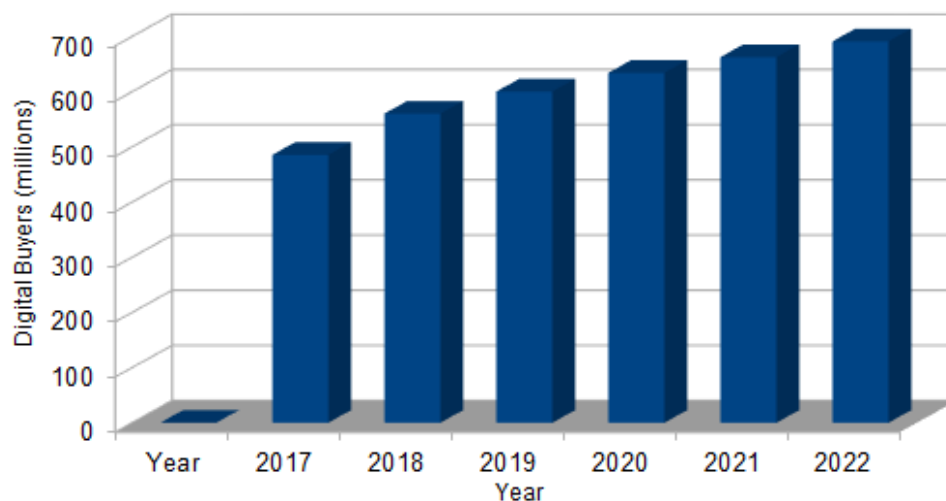
Source: Graph adapted from <https://www.pwccn.com/en/retail-and-consumer/publications/global-consumer-insights-survey-2018-china-report.pdf>.

EXHIBIT 15: DO CONSUMERS IN CHINA LIKE COMBINING DIGITAL AND PHYSICAL RETAIL?



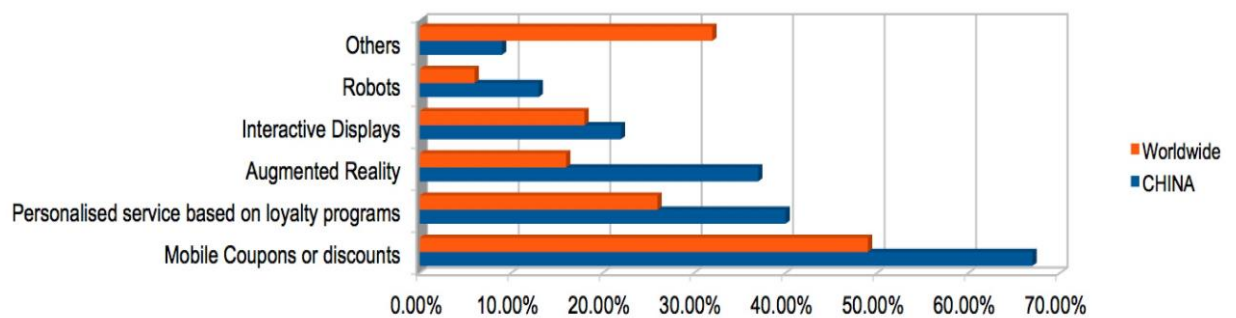
Source: Graph adapted from <http://www.chandlernguyen.com/blog/2019/02/16/retail-e-commerce-in-china-key-facts-and-trends/>.

EXHIBIT 16: DIGITAL BUYERS AND PENETRATION IN CHINA (2017–2022)



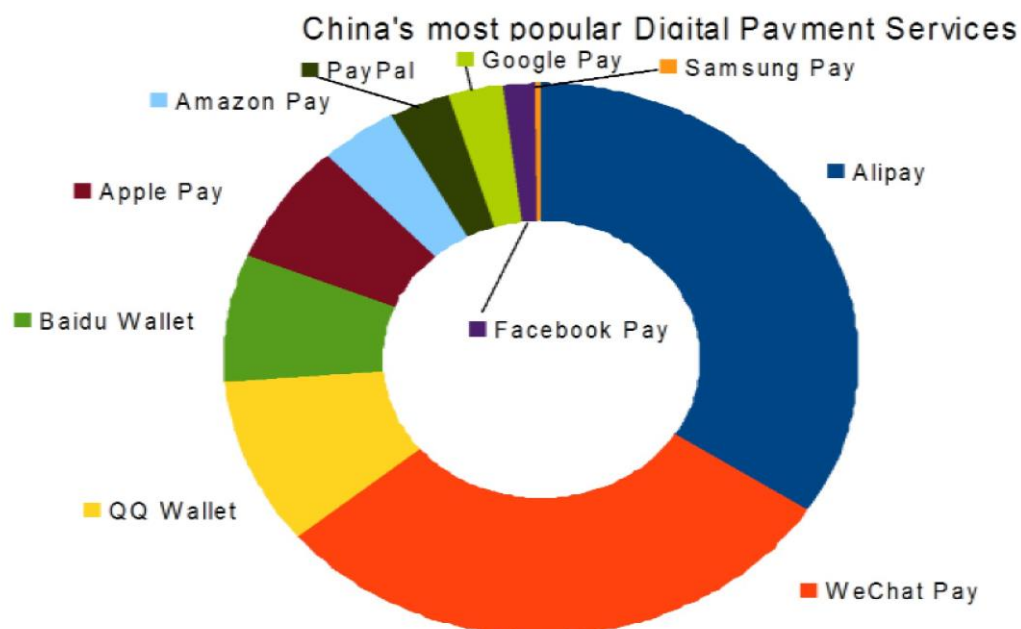
Source: Graph adapted from <http://www.chandlernguyen.com/blog/2019/02/16/retail-e-commerce-in-china-key-facts-and-trends/>.

EXHIBIT 17: WHICH EMERGING TECHNOLOGIES HAVE INTERNET USERS IN CHINA AND WORLDWIDE USED WHEN SHOPPING IN-STORE?



Source: Graph adapted from <http://www.chandlernguyen.com/blog/2019/02/16/retail-e-commerce-in-china-key-facts-and-trends/>.

EXHIBIT 18: CHINA'S MOST POPULAR DIGITAL PAYMENT SERVICES



Source: <https://www.statista.com/chart/17409/most-popular-digital-payment-services-in-china/>.