

Future of Retail

Exponential technologies (AI, VR, 3D printing, and networks) are radically reshaping traditional retail.

E-commerce giants (Amazon, Walmart, Alibaba) are digitizing the retail industry, riding the exponential growth of computation.

Many brick-and-mortar stores have already gone bankrupt, or migrated their operations online.

Massive change is occurring in this arena. All one needs to do is look at the following table to understand the massive upheaval afoot.

	2006	2016	2018	06 - '18
<u>Company</u>	<u>Value (\$B)</u>	<u>Value (\$B)</u>	<u>Value (\$B)</u>	<u>% Change</u>
Sears	\$14.3	\$0.9	\$0.3	-98%
JCPenney	\$18.1	\$1.7	\$1.2	-94%
Nordstrom	\$12.4	\$7.7	\$8.9	-28%
Kohl's	\$24.2	\$7.1	\$11.2	-54%
Macy's	\$24.2	\$7.1	\$9.3	-62%
Best Buy	\$28.4	\$18.5	\$21.4	-25%
Target	\$51.3	\$31.7	\$40.9	-20%
Walmart	\$214.0	\$243.9	\$262.9	23%
AMAZON	\$17.5	\$474.4	\$726.3	4050%

E-Commerce Trends

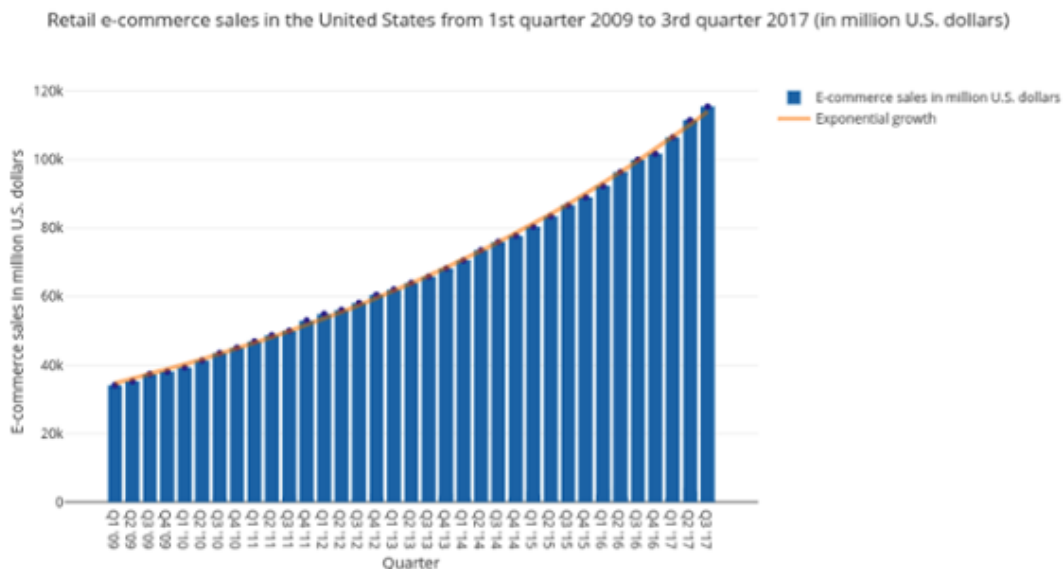
Last year, 3.8 billion people were connected online. By 2024, thanks to 5G, stratospheric and space-based satellites, we will grow to 8 billion people online, each with megabit to gigabit connection speeds.

These 4.2 billion new digital consumers will begin buying things online, a potential bonanza for the e-commerce world.

At the same time, entrepreneurs seeking to service these 4-billion+ new consumers can now skip the costly steps of procuring retail space and hiring sales clerks.

Today, thanks to global connectivity, contract production, and turnkey pack-and-ship logistics, an entrepreneur can go from an idea to building and scaling a multimillion-dollar businesses from anywhere in the world in record time.

And while e-commerce sales have been exploding (growing from \$34 billion in Q1-2009 to \$115 billion in Q3-2017), e-commerce only accounted for 10 percent of total retail sales in 2017.



U.S. ecommerce sales growth

In 2016, global online sales totaled \$1.8 trillion. Remarkably, this \$1.8 trillion was spent by only 1.5 billion people – a mere 20 percent of Earth’s global population that year.

There’s plenty more room for digital disruption.

The In-Store Experience: Experiential Retailing

In 2017, over 6,700 brick-and-mortar stores closed their doors, surpassing the former record year for store closures set in 2008 during the financial crisis. Regardless, business is still booming.

As shoppers seek the convenience of online shopping, brick-and-mortar stores are tapping into the power of the **experience economy**.

Rather than focusing on the practicality of the products they buy, consumers are instead seeking out the experience of going shopping.

The Internet of Things, artificial intelligence, and computation are exponentially improving the in-person consumer experience. As AI dominates curated online shopping, AI and data analytics tools are also empowering “in-real-life” storeowners to optimize staffing, marketing strategies, and customer relationship management and inventory logistics.

In the short term: retail store locations will serve as the next big user interface for production 3D printing ([custom 3D printed clothes at the Ministry of Supply](#)), virtual and augmented reality ([DIY skills clinics](#)), and the Internet of Things ([checkout-less shopping](#)).

In the long term: we’ll see how our desire for enhanced productivity and seamless consumption balances with our preference for enjoyable in-real-life consumer experiences — all of which will be driven by exponential technologies.

One thing is for certain: the nominal shopping experience is on the verge of a major transformation.

Implications

The convergence of exponential technologies has already revamped how and where we shop...

How we use our time, and how much we pay...

Twenty years ago, Amazon showed us how the web could offer each of us the long tail of available reading material, and since then, the world of e-commerce has exploded.

And yet we still haven’t experienced the cost savings coming our way from drone delivery, the Internet of Things, tokenized ecosystems, the impact of truly powerful AI, or even the [other major applications for 3D printing and AR/VR](#).

Perhaps nothing will be more transformed than today’s \$20 trillion retail sector.