IB Business Management

Internal Assessment

Should Costco change its retail strategy, invest in up-selling and cross-selling algorithms to make online shopping more personalized for customers?

Key concept: change

Areas of the Syllabus:

1.6 SWOT & Force-Field Analysis

3.6 Ratio Analysis

3.8 Investment Appraisal

Word Count (without title sheet and tables): 2000 words

Contents

I. Introduction

For most Americans, Costco is a household name. Costco is one of the largest retailers in America, competing in size with stores, such as, Walmart, Kroger and Walgreens. (Carpenter, 2019). Costco is known for its high quality and low-price items that are strategically sold in warehouses. By having their buyers walk through large warehouses, customers buy products that, upon arrival, they had no intention of purchasing. This is known as cross-selling and up-selling customers. Using these and other tactics, Costco has experienced massive revenue growth and expansion in the past decade as it has attracted diverse customers base while minimizing its advertisement spend.

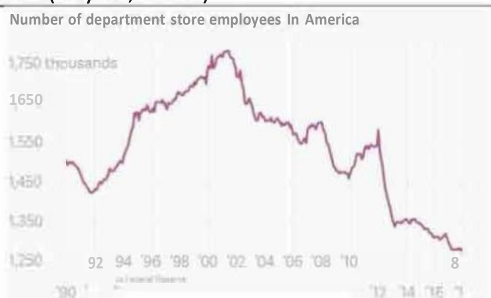
Although its ability to cross and up sell customers is visible in its brick-and-mortar stores, Costco lacks these strategies online. Many competitor retailers, such as, Amazon and Walmart are specifically investing in online retail, ensuring personalized experiences for customers. Clearly, Costco hasn't prioritized its e-commerce, as illustrated in "Costco quarterly revenue misses estimates on weak e-commerce growth". As a result, Costco doesn't have a user interface (UI) as friendly or an e-commerce base as profitable as its competitors', as seen in "We wouldn't have e-commerce without Amazon".

Even though e-commerce seems like a necessity, not luxury, it won't be easy for Costco to implement this personalization. In the past, there have been issues with online personalization (i.e. "recommended for you" or "users also bought") as explained in "Personalization Might Be the Future of E-commerce, but First, We Have to Make It Cool – Not Creepy". While Costco may want to invest in online retail to match its competitors, the change will have its challenges. In order for Costco to be able to compete with other companies' e-commerce sectors, **Should Costco change its retail strategy, invest in up-selling and cross-selling algorithms to make online shopping more personalized for customers?** To analyze the question, a competitor analysis, a SWOT analysis, a force field analysis and a ratio analysis will be used. These will aid us in determining several things including how competitors have benefited, weighing the benefits and drawbacks for Costco, Costco's financial ability to invest among other factors.

II. Analysis

A. Competitor Analysis

The competitor's analysis is important when considering whether or not Costco should further invest in up-selling and cross-selling e-commerce algorithms. This tool will reveal how other competitors have benefited and how Costco has a disadvantage by not investing.

Costco	• As of 2017, e-commerce sales were about $15 billion compared to 2020 where it is projected to be roughly $38 billion. (Team T., 2020) • As of the first quarter end, the company's e-commerce only rose 5.7%, considerably short of the 21.9% jump in the previous quarter and the 28.2% from the quarter before that. Despite Costco's e-commerce growth, the growth isn't comparable to that of other retailers. (CNBCRetail, 2019) • Historically, Costco has lagged behind competitors such as Walmart and Target in terms of online sales - in wide part because the retailer didn't make any major effort to grow online sales. That is finally beginning to change. (Taylor, 2018) • "The biggest things are awareness and cross-marketing" to persuade in-store customers to give online shopping a try, Costco CFO Galanti said. (Taylor, 2018)
Amazon	• As a company, Amazon sells almost entirely online, Amazon's sales of $258.22 billion accounts for a whopping 46% of the online market and 5% of the US' total retail sales (Schrager, 2019). • But not only has it been exceptionally successful in terms of e-commerce, but the presence of Amazon has essentially destroyed retail, as illustrated by graph 1 (Schrager, 2019)  Graph 1
Walmart	• With e-commerce already accounting for 8% of Walmart's total revenue, it is only expected to go up from here as Walmart continues to emphasize e-commerce growth (Team T., 2020). • Walmart's e-commerce sales in the U.S. grew by 41% in the third quarter - its strongest quarter reported so far in fiscal 2019. The company estimated online sales would grow by 35% for the full year. (Repko, 2020) • But key to all those growth numbers is this: the better-than-expected 40% jump in online sales. Walmart president and CEO Doug McMillan said in prepared remarks, "To help deliver a more compelling store experience, we continue to bring digital capabilities to our stores to deliver a seamless experience for customers, however they choose to shop." (Cheng, 2018)

Starting with Amazon, almost all of its retail revenue comes from online sales. The efficiency that comes with Amazon's online shopping has helped it sell more products to customers and increase its customer base. This virtuous cycle helps Amazon gain higher of customer spending, which in turn hurts brick and mortar retailers. Another example is of a largely brick-and-mortar store, Walmart, where investment in e-commerce has shown clear benefits. E-commerce continues to account for a large part of its revenue and grows rapidly year-over-year. These examples illustrate the advantages of e-commerce that retailers reap. Although, Costco has started investing in e-commerce, its online sales have often fallen short of quarterly guidelines. This possibly can be mitigated with additional investment in personalization algorithms that will result in up-selling and cross-selling and additional sales. Also, investing in e-commerce will allow Costco to attract a younger demographic similar to that of Amazon.

As seen by other competitors' strategies, enough investment in e-commerce will reap clear benefits. This should encourage Costco to increase investment as well, because it's clear that Costco has a lot to gain.

B. SWOT

The SWOT analysis is especially important for analyzing Costco's situation in respect to its ability to implement this, as well as the opportunities and threats brought on by this change.

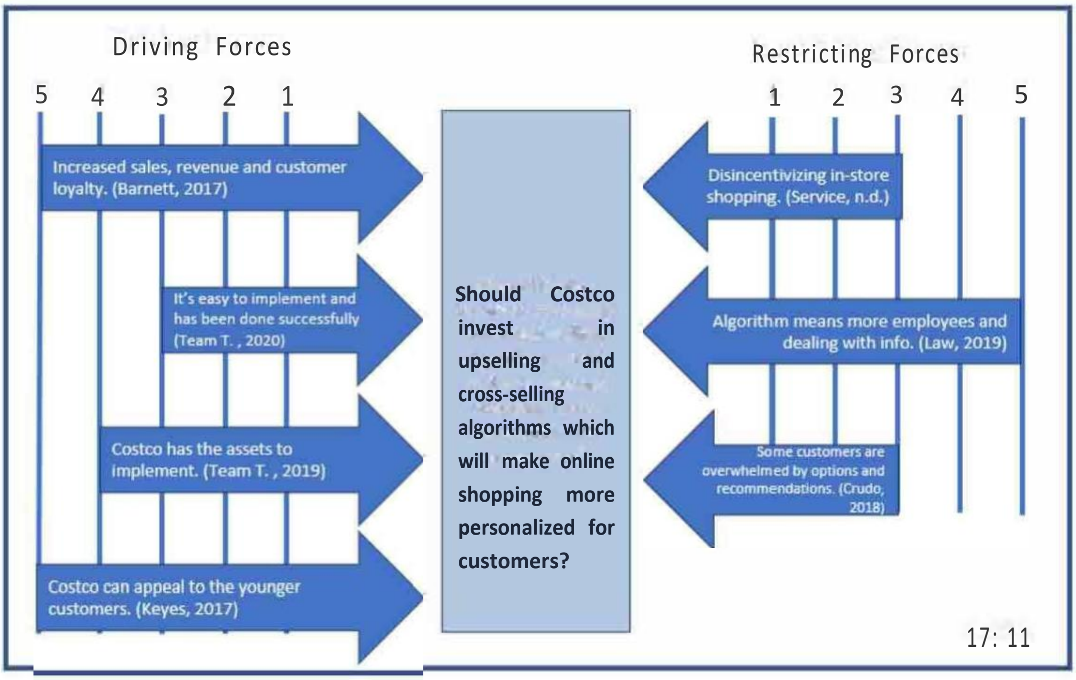
Strengths	Weaknesses
- Over the last few years, Costco has experienced sharp membership and revenue growth. This strong performance enables it to invest in expansion and e-commerce. (Team **T.**, 2019) - Investing online can mean that Costco can personalize products for customers. (Shopify, 2018) - By personalizing accounts online and providing alternative products for customers, companies are likely to see an increase in sales revenue owning to the increased efficiency and convenience. (Shopify, 2018)	- If Costco over invests and becomes a largely online company it won't be able to successfully compete with retail industry giants including, but not limited to Amazon and Walmart. (Team T., 2020) - One of Costco's largest niches is that they are a hugely successful in-person retailer. They are able to cross and upsell their customers in stores by overwhelming them with large varietyof goods at low prices. Going online may mean losing this edge to other competitors if Costco isn't effectively able to cross and up sell buyers. (Investoped ia, 2019)

Opportunities	Threats
- By investing in e-commerce, Costco can experience considerable revenue growth similar to those of its competitors (Team T., 2020) - Companies with an active e-commerce industry see considerable revenue stemming directly from this industry. (CNBC Retail, 2019) The implementation of e-commerce and - features like Spark (which allows customers to shop by taking pictures of desired products) have greatly increased attraction from Gen Z and millennials. (Keyes, 2017) Cross and upselling algorithms which increase - personalization result in improvedsales, larger order sizes, higher levels of engagement, improved customer experience and improved customer loyalty.(Barnett, 2017)	- Through expansion, Costco will be forced to take all their products online. Products that they strictly sellin store will be moved online which will disincentivize customers to come to store (Service, n.d.) - In order to effectively improve e-commerce, Costco will need to employ a large number of people in software and other engineering roles-which poses short-term organizational and structural challenges. (Law, 2019) - With personalized e-commerce, Costco needs to be prepared for the massive amounts of information. (Law, 2019)

Through further SWOT analysis we can determine pros and cons of this change. Costco's biggest advantage is that they have large revenue and assets, which enables them to spend in effective research and personalization in the e-commerce sector. Additionally, Costco will adapt quickly to increased personalization as it has already penetrated the e-commerce sector. Costco's only weakness is its insufficient experience compared to major online retailers. Also, Costco brand is a large warehouse where customers enjoy the selection and shopping experience. It must maintain this differentiation even after e-commerce investments. Efficient personalization could result in increased revenue, high customer loyalty and spending, and competitiveness with online retailers. The threat of reduced in-store customer traffic isn't sustainable and can be an opportunity as personalization algorithms will result in equal or increased customer spending, equating to equal or higher revenue. Other threats, such as, dealing with more information and organizational changes are unavoidable consequences of shifts in customer shopping preferences and spending behavior. For Costco to stay relevant, it needs to overcome these hurdles. Yet despite these challenges, the opportunities and strengths clearly outweigh the threats and weaknesses showing us, from a SWOT perspective, Costco can, and should, invest in e-commerce.

C. Force Field Analysis

The force field analysis is important to compare the impact of the driving forces to the restraining forces of this change. Through this we can see whether the benefits outweigh the drawbacks of this change.



Through this force-field analysis we can see that the driving forces outweigh the restraining ones by a score of 17 to 11. The critical factors that will determine the success or failure of the change received the highest rank "5". These factors are driving forces, such as, increased revenue and a broader demographic, are vital to the future success of Costco, and also the critical restricting forces, such as, increased need for employees and data management which can be difficult for Costco to acquire in a given time. There are also less impactful driving forces including Costco's ample assets and the success of other companies. These received a 4 and 3 respectively as they show that success can be achieved. There are less impactful restricting forces, like disincentivizing customers from in-store shopping and customers being overwhelmed with decisions both received "3"s because Costco can learn to overcome these by learning from its competitors examples. When adding up the levels of impact on both sides, it's clear that the driving forces weigh more than the restricting forces.

D. Ratio Analysis

The ratio analysis is vital in evaluating a company's liquidity, operational efficiency and profitability. These will give us insight to how financially feasible investing in e-commerce is for Costco.

Company:	Costco	Amazon*	Walmart	Equation
Profitability				
Gross ProfitMargin	12.98%	26.65%	24.69%	Gross Profit / Revenue
Net Profit Margin	2.40%	4.13%	2.84%	Net Profit / Revenue
liquidity Ratios				
Current Ratio	1.01:1	1.10:1	0.79:1	Current Assets / Current Liabilities
Acid Test	0.52:1	0.86:1	0.22:1	Current Assets-Inventory / Current Liabilities
Efficiency Ratio				
Return on Capital Employed (ROCE)	0.165:1	0.084:1	0.094:1	Operational Income / Capital Employed

*Amazon financials include AWS financials, increasing its profitability figures (Finance, 2019)

Although Costco's profit margin is less than that of its competitors, its net profit falls closer to other brick and mortar retailer. This means that relative to its size, Costco has the ability to invest in e-commerce. However, Costco's current ratio is less than the recommended (1.2-2.0) which indicates it may have difficulty meeting current obligations. As the numbers indicate Costco's competitors are in similar situations, implying that this is something common among retailers and may not be a large disadvantage. Costco's acid test shows that it has more liabilities than assets, and this imbalance must be treated with caution. But seeing that other retailers have similar acid test ratios, it may not prevent Costco from expanding. Notably, Costco's advantage is higher ROCE which means that it's efficiently using its capital. In its entirety, Costco's ratio analysis suggests that it has a similar situation as that of its competitors. As its competitors have increased e-commerce investment, it implies Costco has the ability and supporting ratio analytics to support investment in cross-selling and up-selling algorithms for e-commerce.

III. Conclusion

To answer the research question, should Costco invest in up-selling and cross-selling algorithms which will make online shopping more personalized for customers, yes it should. As seen in the competitor's analysis, if Costco wishes to maintain its competitiveness with other retailers, this investment needs to happen as soon as possible. And as proven by the ratio analysis and SWOT, Costco has the assets available to research and implement the personalization of the online shopping sector. Implementation of this idea has tremendous benefits including increasing Costco's revenue, customer loyalty and engagement while also expanding its customer demographic to include millennials that prefer online shopping. Investing doesn't even have much of an opportunity cost as the online sector has already been sufficiently developed by other companies, so the research and information is readily available.

However, Costco needs to be sensitive to not overwhelm customers with options; and to effectively manage the increase in information and organization changes that will accompany the development of this technology. But as the force field analysis shows, these restricting forces shouldn't be a hindrance because this change presents large opportunities for growth, and when considering both the drawbacks and the gains, it's clear that the gains outweigh the drawbacks.

Investing in this sector has historically been successful for other companies, however, Costco will need to assess its options as it isn't a 100% guarantee that it is worth Costco's resources. The recommendations in this paper are constrained by limited publicly available information about Costco's existing e-commerce investment and experience.

IV. Bibliography

Barnett, J. (2017, August 04). *Business.com.* Retrieved from Marketing Strategies : https ://www.business.com/artides/web-personalization-key-to-e-commerce-success/

Carpenter, J. W. (2019, May 16). *Investopedia.* Retrieved from Top Stocks: https://www.investopedia.com/articles/markets/122415/worlds-top-10-retailers-wmt-cost.asp

Cheng, A. (2018, August 16). *Forbes Editor's Pick.* Retrieved from Forbes: https://www.forbes.com/sites/andriacheng/2018/08/16/walmarts-e-commerce-tactic-against-amazon-is-paying-off/#61f2ddfcb74d

CNBCRetail. (2019, December 13). Retrieved from CNBC: https://www.cnbc.com/2019/12/13/costco-quarterly-revenue-misses-estimates-on-weak-e-commerce-growth.html

Crudo, B. (2018, September 17). *Martech Advisors.* Retrieved from E-commerce: https://www.martechadvisor.com/articles/e-commerce/personalization-the-future-of-e-commerce-but-first-we-have-to-make-it-cool-not-creepy/

Hanburt, M. (2019, July). *Business Insider .* Retrieved from Gen Z: https://www.businessinsider.com/gen- z-shopping-habits-kill-brands-2019-7

Hoang, P. (2014). *Business Management 3rd Edition.* Victoria, Australia: IBID Press.

lnvestopedia. (2019, June 25). *Investopedia.* Retrieved from Stocks: https://www.investopedia.com/stock-analysis/040915/3-reasons-costco-great-company-cost.aspx

Keyes, D. (2017, June 20). *Business Insider.* Retrieved from Business Insider: https://www.businessinsider.com/amazon-launches-new-social-commerce-tool-to-attract-millennials-gen-z-2017-7

Kramer, M. J. (2018, Feburary 22). *Investopedia.* Retrieved from Investopedia Market News: http://www.investopedia.com/news/costco-stock-may-be-fueled-higher-e-commerce-opportunities/

Lauchlan, S. (2018, October 7). Retrieved from https://diginomica.com/costcos-dilemma-e-commerce-is- the-future-but-the-business-model-is-about-the-warehouses

Law, T. J. (2019, December 2). *Oberlo.* Retrieved from Oberlo Economics Basics: https://www.oberlo.com/blog/e-commerce-statistics-guide-your-strategy

Numerator. (n.d.). *Numerator.* Retrieved from Retailer Snapshot: https://snapshot.numerator.com/retailer/costco

Repko, M. (2020, February 17). *CNBC Retail.* Retrieved from CNBC: https://www.cnbc.com/2020/02/14/as-walmart-ramps-up-e-commerce-analysts-wait-to-see-or-watch-to-see-if-losses-will-rise-or-shrink.html

Schrager, A. (2019, October 22). Retrieved from Quartz: https://qz.com/1688548/amazons-control-of-e-commerce-has-changed-the-way-we-live/

Service, C. (n.d.). *Costco.com.* Retrieved from Customer Service FAQs: https://customerservice.costco.com/app/answers/detail/a_id/670/~/are-the-same-products-available-on-costco.com-and-in-costco-warehouses%3F

Shopify. (2018, April 19). *Shopify.* Retrieved from Shopify, Industry Reports: https://www.shopify.com/enterprise/e-commerce-personalization-exampies

Taylor, K. (2018, March 08). *Business Insider.* Retrieved from Business Insider: https://www.businessinsider.com/costco-online-sales-skyrocket-2018-3

Team, T. (2019, 23 August). *Forbes.* Retrieved from Forbes Money: https://www.forbes.com/sites/greatspeculations/2019/08/23/costco-why-did-the-stock-double-in-4-years/#44cbe26b4fcl

Team, T. (2020, March 2). *Money.* Retrieved from Forbes: https://www.forbes.com/sites/greatspeculations/2020/03/02/how-much-in-online-revenue- can-walmart-generate-in-2020/#67b920652e26

V. Appendix

Source Document #1: Personalization Might Be the Future of E-commerce, but First, We Have to Make It Cool – Not Creepy

URL: https://www.martechadvisor.com/articles/e-commerce/personalization-the-future-of-e-commerce-but-first-we-have-to-make-it-cool-not-creepy/

Innovation in online retail hinges on technology, sure, but more importantly on earning consumer trust, says Ben Crudo, CEO and Founder of Diff, an e-commerce agency

If you shop for men's suits, you probably know a "Sal." He's worked at your go-to menswear store forever and has been helping you for years. By now he knows what you want even before you do.

He shows you pieces that fit your budget, cuts that are complementary and brands you've liked before. In short, he's the ultimate experience in personalized retail.

For online retailers, the Holy Grail of e-commerce is in replicating Sal's talent with technology. The dream is to make online shopping just as frictionless, pleasant and carefully curated as an in-store experience with a great salesperson.

Online personalization is widely hailed as the future of retail, and for good reason: Retailers who take even the most basic steps toward providing a bespoke experience can see major boosts to conversion rates. Even something as simple as personalizing your email blasts increases transaction rates by 600 percent.
But here's the thing. We're not there yet - not by a longshot. Despite advances in artificial intelligence and more data at our fingertips than ever before, there are significant hurdles to clear before we can provide a personalized shopping experience that offers *consumers* anything near the value of our old friend Sal. For shoppers and retailers out there, here are what's standing in the way and some ideas on how to really move the needle on personalization.

Overcoming the creepiness factor

We've all been there. You check out a new pair of shoes online and suddenly they start popping up on every site you visit. These "stalker ads" are the pinnacle of personalization technology right now. But while they might be appealing to advertisers seeking to boost their presence, they freak out prospective customers. In fact, 75% of consumers find most forms of personalization creepy, which is why Google now lets you opt-out of ads that know "too much" about you.
That big brother vibe is a result of metadata - things like your IP address, your geographic location, and even how you move your mouse - frequently collected by shared advertising platforms to enable ads to follow you from Amazon to Facebook to your favourite blog or news site.

In rare cases, this can be useful in getting consumers to cross the finish line and purchase products they really want (brands see a 400 percent increase in ad performance when they use targeting). But on the whole, it's a clumsy and obvious process that, rightfully, creates a sense of paranoia in users that their every online move is being monitored - and ultimately sold.

To overcome the creep factor, we need to move away from blanket surveillance and instead create curated experiences that are as valuable for consumers as they are subtle. We're already seeing this on subscription sites like Spotify and Netflix that make seamless recommendations based on users' patterns - and, importantly, enhance their experience by doing so.

In the retail world, non-invasive personalization will take a slightly different form. Imagine browsing your favourite store's site on a rainy day and being greeted with umbrellas and raincoats thanks to algorithms that use geography and weather reports to customize your experience. This is the kind of approach my company is developing for some of our clients now, but in order for personalization to truly make the leap from creepy to curated, retailers have another big hill to climb.

Earning information by earning trust

With privacy in the limelight right now thanks to the Cambridge Analytica scandal and the introduction of the European Union's General Data Protection Regulation (or GDPR), people are starting to ask questions about where their information is going and getting more concerned about how it's acquired.

Right now, it's easy for companies to regard privacy as an afterthought, but stakes are being raised. Half of Americans feel their personal information is less secure than five years ago, and people are now more concerned about internet privacy than they are about losing their income.

New legislation like the GDPR is starting to shift that balance by requiring companies to tell people what information is being collected and how it's being used, as well as to give them the right to delete all their data. In the not-so-distant future, we just might evolve to a point where people consciously opt to lend their information to a site for a given period of time, rather than unwittingly give it away forever.

This will be a great win for personal privacy. But it will also put the onus on retailers to show consumers a real return on the personal info they share. One company, like it or not, that does an exceptional job at this now is Amazon. Their personalization engine creates value for consumers by whittling down the milliodatans of products they sell to the select few that are most relevant. You go to the site to browse, but because the company has a record of all your past purchases and every click you've ever made on the site, the front page is going to be uniquely customized to your needs.

It works amazingly well. It also requires reams of personal data. The question going forward is whether retailers will be able to convince consumers to share the sensitive information necessary to make that kind of curation possible.

Getting to true personalization

Despite the growing volumes of personal data scraped off the web, the reality is we're still a far cry from seeing the kind of personalization offered by a great salesperson like Sal. Those annoying banner ads for sunglasses may know you like RayBans, but they probably don't know you need polarized prescription lenses and have astigmatism. Right now, most tech still dumps us into big demographic buckets, without actually seeing us as unique individuals.

Platforms like Dynamic Yield and Adobe Experience are doing a better job every day of more accurately gathering and guessing consumers' personal preferences, and in the future this intel may well lead to unique landing pages curated to individual interests and needs. The end goal: create an experience so cool and so compelling that you'll willingly lend your info to help make it even better - just as you'd happily volunteer size, cut and color preferences in your favourite brick-and-mortar store. Here's hoping we get there sooner rather than later.

Source Document #2: Costco qua rterly revenue misses estimates on weak e-commerce growth

URL: https://www.cnbc.com/2019/12/13/costco-quarterly-revenue-misses-estimates-on-weak-e-commerce-growth.html

Costco Wholesale reported lower-than-expected quarterly revenue on Thursday, hit by a slowdown in the number of customers shopping on the warehouse club operator's website.

U.S. g rocers have become increasingly dependent on their online businesses to drive sales growth as consumers demand the convenience of shopping at home or at work in a sector saturated with low-price competition.

However, Costco blamed a late Thanksgiving weekend this year for denting sales in the first quarter ended Nov. 24.

The company's e-commerce comparable sales rose only 5. 7% in the first quarter, far short of the 21 .9% jump in the previous quarter and a 26.2% gain in the year-ago quarter.

It also faced a website outage during the Thanksgiving period, which happened after the first quarter ended.

"Expectations are high. Some of the times e-commerce sales do not grow 20% and people get disappointed," Edward Jones analyst Brian Yarbrough said.

"They (Costco) are not pursuing e-commerce as aggressively as other retailers like Target, Walmart or other retailers... they want customers in the clubs as people buy a lot more when they see the deals."

Shares of the Issaquah, Washington-based company that have risen 45% this year were down about 1 % in extended trading.

However, Costco's comparable sales, excluding the impact of currency and gas price fluctuations, rose 5%, above the average analysts' estimate of 4.95%.

Excluding items, Costco earned $1 .73 per share, beating Wall Street expectations of $1 .72, according to IBES data from Refinitiv.

Total revenue rose 5.6% to $37.04 billion, but fell short of analysts' projection of $37.25 billion.

Net income attributable to the company rose 1 0% to $844 million, or $1 .90 per share, from a year-ago.

Excluding items, Costco earned $1 .73 per share, beating Wall Street expectations of $1 .72, according to IBES data from Refinitiv.

Source Document #3: We wouldn't have e-commerce without Amazon

URL: https://qz.com/1688548/amazons-control-of-e-commerce-has-changed-the-way-we-live/

It is hard to overstate the significance of how commerce changed between 2000 and 2010.

For most of human existence, with some notable exceptions, shopping usually involved leaving the house, seeing and touching the goods on offer, and having a conversation with a stranger. Now you can get almost anything-even a house-with a single click.

That shift happened in part because of a single company: Amazon. E-commerce has evolved in the last 20 years, but it was Amazon that did the most to alter how we buy, sell, and transact. It has been among the most innovative and claims most of the e-commerce market.

The result, of course, is an economy forever changed. According to survey data from Pew, in 2000 only 22% of Americans had ever shopped online, now 80% do, at least somewhat regularly. This shift has consequences not only for how we buy, but also for the labor market, and perhaps even more significantly, how the economy functions.

A history of buying stuff

Long before the internet, people shopped remotely. Soon after the creation of the printing press, along came catalogues, originally selling books or seeds, to a small population ofbuyers looking for specialized products.

In the same way mail order catalogues created America's consumer culture, e-co1nmerce is altering the American economy and its culture.

Amazon started in 1995 as a bookseller, but its ability to innovate and constantly reinvent itselfmade it the powerhouse that dominates the market today. Other e-commerce companies, like the first online book seller, books.com, stuck to what they knew. But Amazon diversified into other products in 1998. In the 2000s, it started selling almost everything you could ever want and opened up its platform to third-party retailers. Depending on how you count them, Amazon sells more than 12 million different products, from baby formula to rare coins. This meant it became easy to compare prices and products (and see reviews) in a way that was impossible in person. In 2005 it launched Amazon Prime, which streamlined the ordering process, offered free delivery, and created more customer loyalty. It was during this period that buying goods online became a way of life. In the same way mail order catalogues created America's consumer culture, e-commerce is altering the American economy and its culture.

Suddenly, for the first time, it became easier to buy from home (or work) than in person. Now, everyone has similar access to a broad array of goods, no matter where they live.

In terms ofvalue, e-commerce still makes up a fraction of purchases. The figure below is the share of transactions that occurred online between 1999 and 2019. But 10% is only the value oftransactions as a share of total retail sales, which includes big ticket items, like cars, which are still bought in person.

In 2018, Amazon took in $2.58 .22 billion in sales, half ofthe online market, and 5% of US total retail sales. Some of the growth came organically, and some from major acquisitions of big online retailers, like Zay_pos, review sites, like Goodreads, and in-person retailer, Whole Foods. Though its sales numbers are still behind Walmart, $331.67 billion (includes sales from brick and mortar). At the rate it's growing, Amazon, and online retail, may one day surpass brick and mortar stores. Continuing to grow at this pace may not be possible; in just 25 years Amazon became one of the world's largest retailers.

It's hard to imagine it could get any bigger in terms of sales. It seems as though it's picked all the low-hanging fruit. But it has not reached all international markets and there's still scope to take a big share of that remaining 90% of the market claimed by in-person retail. Amazon may come up with ways to sin1tlate the best features of an in-store experience, like trying on clothes or sitting on a sofa, and to make delivery even faster and more predictable.

s

Amazon did more than make it easier and faster to buy things; it altered the nature of commerce and with it the US economy. It changed how and where people work and, equally important, it changed how prices are set and how often they change.

Before we bought online, merchants might only increase prices once or twice a year in response to inflation or competition. Now, to stay competitive, online retailers use algorithms, which change prices more frequently to match demand. Some online retailers, like Walmart, scrape data from their competitors to stay current on the latest market price. Research from economist Alberto Cavallo estimates that price changes have become almost twice as frequent as online transactions became more common. He also estimates that mark-downs have become more common than mark-URS. He credits more competition as the reason the price of products sold on Amazon change more frequently.

Before, goods might be cheaper in poorer areas or more expensive in certain countries. Now, prices tend to be the same everywhere-both online and in stores.

Price pressure and competition from e-co1nmerce are big reasons why many store fronts are empty.

Mostly this has meant access to cheaper goods, which benefits all consumers-especially low-income Americans. But lower prices across geographies also squeeze retailers in high-cost areas when they can't charge much more for their products, but still must pay higher rent and wages. Price pressure and competition from e-commerce are big reasons why many store fronts are empty and retailers like bookseller Borders no longer exist. Even large retailers with multiple chains find it difficult to survive in a more cut-throat price environment. The figure below is the number of retail employees in American department stores. After 2000, jobs started to decline, even when the economy was booming.

This has become a source of concern for policy makers. Treasury Secretary Steven Mnuchin said Amazon "destroyed retail" and wants to investigate breaking it up. Amazon is not technically a monopoly; it is still only 5% of retail and half of online sales, even though it does dominate and impact prices for the entire market. In the past, monopolies were broken up because they overcharged customers; Amazon is blamed for charging too little and squeezing out the competition. The fear is that eventually Amazon could gain even more market power and be free to increase its prices. However, that argument is speculative because online retail's history is too short to know how competition will evolve.

But there is no doubt that Amazon is making it harder for brick and mortar retailers to survive. Traditionally, retail has been an important source of jobs for low-skilled workers, especially women. An e-commerce economy requires fewer retail jobs, and low-skill, low wage workers will bear the brunt ofthat transition. Jobs at wish fulfillment centers and delivering goods will replace some of the jobs, but they require fewer people: Amazon only employs 250,000 people (including corporate and executive jobs) and another 100,000 during the holidays. More than 500,000 department store jobs disappeared between 2001 and 2017. The lower-skilled Amazon and deliveryjobs are also more physically demanding. On the upside, they may pay more and employees may have access tojob training.

We can't be certain what the long-term impact will be. Some in-person retail stores will continue to exist, the Walmarts and Targets will still survive because they have the scale to compete with Amazon. But it will be harder for non-chains to survive the low prices and convenience Amazon offers. Eventually, the only independently owned stores that exist will offer exceptional service and high-margin goods, which means shopping in person at a small store will become a luxury few can afford. Another way retail might go is fewer permanent stores and more pop-ups. They offer a more stimulating retail experience than a traditional store, but their transience makes it impossible to form a relationship with local merchants.

One immediate impact is social. You can buy just about anything without interacting with another human. Historically market places are where humans met and interacted; it was central to communities because it brought people together. Buying online may be easier, but it could be another factor contributing to feelings of isolation, rising anxiety, and depression. Bragging about what you buy on social media is not the same as an in-person experience-it can even add to anxiety.

But we needn't assume it is all for the worse. Each new technology that alters the economy poses costs and benefits. Economists generally consider access to more goods, for lower prices, a net positive. There is no doubt that consumers benefit: a single, working mother no longer has to take the time to buy toilet paper from a store, and can purchase it in bulk more cheaply. As e-commerce continues to grow, much is gained, but there is also something lost.

How we buy can be just as important as what we buy, the last big innovation in retail created America's consumer culture, where everyone-not just the rich-could buy many, and similar, goods. The result was that we prized and prioritized owning things. Now buying online will be just as transformative. We can, and are encouraged to buy every waking hour. Our credit card's spending limit is our only constraint. Perhaps the ease of buying will make goods less novel and experiences will become even more dear people already pay a premium to get offline. Or maybe unlimited access will create a consumer culture on steroids-even more than what we see today, where nothing is ever enough and most people are constantly in debt.