Amazon Go Store Implications
for the Traditional Retail Market

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Abstract

This paper aims to analyse the Amazon Go Store concept and the business model. It demonstrates the potential of a disruptive surge for the retail market. Therefore, this document helps to understand the Amazon Go Store concept and delivers insights for existing retail market businesses. This paper does not cover all perspectives, but the aim is to use this document as a discussion paper to identify possibilities for existing retailers. Based on the Amazon case study (Kittilaksanawong & Karp 2017) the content of the paper will be reflected and analysed. Furthermore, the case study will be analysed, and possible scenarios will be discussed. The Amazon case study describes the growth development of Amazon between the founding in 1994 and the first internal opening of the Amazon Go store in Seattle by end of 2016. If you already know the Amazon case study (Kittilaksanawong & Karp 2017), follow directly with the next section. For a better understanding of the evolution of Amazon reading the case study beforehand is recommended.

Keywords

Amazon Go Store, Business Model Amazon, Retail Market, SWOT Analysis Amazon Go

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1. Amazon Go: Venturing into Traditional Retail

Amazon Go Concept:

The original case study did not go into details, how the Amazon Go retail concept looks like. For a better understanding and as well to point out the different customer shopping experience, I would like to describe some main features and differences to conventional retail stores. Based on the YouTube video (Silicon Valley Girl 2018) it is possible to see how the first Amazon Go store in Seattle looks like. There is a check-in counter, where the customer registers via the Amazon Go app to enter the shop. The tester discovered during the test, that if the tester brings people within the shop, all goods will be charged to the testers Amazon account (it is not explained, how Amazon matches the guests to the account owner). The shop ceiling is full of installed cameras, which are permanently monitoring the customer movements, goods pick up and customer face detection. Algorithms with Artificial Intelligence (AI) technology are permanently monitoring the shop, goods and customers. To identify the goods, some products got a special sticker on the top side. There is no cashier in the shop, as all pick-ups are live monitored and charged to the testers Amazon account directly. Afterwards the customer compared the shopping with the online received invoice and noticed that the AI algorithms calculated correctly without any mistake. The customer was happy about the shopping experience but would like to upgrade the product portfolio with more organic food. Another tester on YouTube (Linus Tech Tips 2018) recognized, that only a special amount of people is allowed to enter the shop. The others need to stand in a waiting line before entering.

Based on this short overview, it is important to understand, that the possible retail move does not mean to open conventional retail shopping stores, it means to change the existing customer shopping behavior with modern technology. It also means, that the possible strategic move into the retail business will be more challenging for Amazon. Besides competing with experienced retail champions like Walmart, Target etc. Amazon will face further challenges like:

- Technology: Will the cameras and the AI algorithms work properly?
- Experience: Will the customers like and accept the new way of shopping?
- Legal: Will the law and customers accept the permanent observation?
- Trust: What will happen with the collected customer and product data? How accurate will be the online and offline user profiling data?
- Jobs: Amazon Go stores will not need cashiers and automation will eliminate existing job profiles (there are around 3.5 million cashiers in the US (Linus Tech Tips 2018)).

Shopping Concept Differentiation:

Based on the lower number of steps, the Amazon Go store can increase the shopping convenience for about 33%. There are no check-out lines and repacking procedures (Arren 2018).

Amazon Go	Conventional Store
1. Quick access to everyday products, especially groceries and convenience goods	1. Quick access to same products, groceries, convenience goods
2. Turn-style entry: Consumer enters via Amazon app on smartphone	2. Enter store and start shopping
3. Consumer goes around the store, picks up items, adds to bag, shops like normal	3. Pick up items
4. Consumer exits	4. Wait in line for cashier or self-scan
	5. Take items out of bag, scan them, put back in bag
	6. Consumer exits

Table 1: Comparison of shopping steps between Amazon Go and a conventional store

2. SWOT Analysis

Amazon Go:

Strengths & Weaknesses		Internal performance	
		high	low
Success impact	high	• Brand • Extensive product mix of daily goods • Technology and customer knowledge • Increasing shopping convenience up to 33% • Data analytics	• Limited penetration in developing markets • Limited physical presence (yet) • Limited amount of simultaneously customers
	low	• Highest revenues in the industries	• Imitable business model

		Threats	
		high	low
Opportunities for success	high	• Change customer shopping experience based on new technology (AI, data, sensors, …) • Investment in physical stores • Online food shopping	• Identifying the proper store location • Customers want to do shopping anonymously
	low	• Future development of physical retail food shopping • Legal regulations regarding customer and product data analytics	• Loosing supplier based on private label products • Eliminating cashier jobs

Table 2: Amazon Go SWAT Analysis

	Opportunities	Threats
Strengths	• Use data analytics to identify the best store locations • Eliminate anonymity with best products and new shopping experience	• Invest money to pioneer the development of retail food shopping
Weaknesses		• Invest in physical stores to be more present • Use technology to increase the amount of simultaneously customers • Use online food shopping to penetrate developing markets

Table 3: Amazon Go classical SWAT analysis

Walmart:

The company's growth depends on its ability to capitalize on its retail operational effectiveness and strengths. Walmart can use these strengths to exploit its opportunities in the retail market. The firm can also use its strengths to counteract the threats to its retail business, especially its e-commerce operations. Walmart is using the cost leadership generic strategy (Smithson 2019).

Strengths & Weaknesses		Internal performance	
		high	low
Success impact	high	• Global organizational size (fund growth and expansion) • Global supply chain (business resilience) • Physical stores: 4,761 in 2018 (Statista, 2019)	• Competitive disadvantage against high-end speciality sellers
	low	• High efficiency of supply chain (monitoring and controlling technology) • Competitive advantage against smaller retailers	• Thin profit margins • Business Model is easy to copy

		Threats	
		high	low
Opportunities for success	high	• Expansion in developing countries • Improving quality standards (low-cost and low-quality products)	• Development in HR to develop competitiveness in the labour market • Healthy lifestyle trend
	low	• Aggressive competition (large retailers) • Online retailers	• Globalisation

Table 4: Walmart SWAT Analysis

	Opportunities	Threats
Strengths	• Implement trend monitoring (e.g. healthy lifestyle trend) for continuously market growth • Create new HR strategy for internal development programs	• Use highly efficient supply chain against aggressive retail competition
Weaknesses	• Use an innovated business model for globalisation	• Improve quality product standards to be competitive against speciality sellers

Table 5: Walmart classical SWAT analysis

3. Business Model Amazon

Key Partnerships	Key Activities	Value Propositions	Customer Relationships	Customer Segments
Logistics Associates	Infrastructure Research Innovation (digi/physical) content production	Marketplace (digi/physical) Globalize/Grow/Fufill Standard convenience & pricing Prime convenience & pricing AWS	Reviews Convenience	Customers (buyers) Businesses (sellers) Businesses
	Key Resources Warehouses Game/film studios Infrastructure Brand DataAlgorithm		**Channels** Amazon Go Amazon.com API	

Cost Structure	Revenue Streams
Warehouses People Infrastructure: digi/physical	Prime Sales commission Cloud service

Figure 1: Business Model Canvas Amazon adapted from Business Models Inc. (2019)

Amazon solves problems for consumers and businesses. The Amazon retail business model is serving consumers who want the best deals delivered to them in the most convenient way. The Amazon services business model is providing businesses all around the world a way to reach millions of customers, making marketing and selling easier. The value proposition for consumers is a vast collection of everything: electronics, computers, books and more. All they offer is at the lowest price and shopping plus delivery is convenient. The value proposition for businesses is a whole range of solutions to grow a business, from selling on the Amazon Marketplace, through Fulfilment, to advertising and brand building. The value propositions for both customer segments are information-based offerings. They are personalized and customized based directly on the needs and preferences of their customers. It's always Day 1 at Amazon, which ensures the entire company is focused on results, makes decisions quickly,

and is looking outside for important trends. These three elements of the philosophy are actively used by people within the company to drive and explore value creation for customers (Business Models Inc. 2019).

The Day 1 mindset encourages, motivates, and challenges everybody to embrace change and experiment with what works for customers and what doesn't. As a digital native company, Amazon is using data to drive decisions to improve the shopping and user experience. Since the start of the company they have been using machine learning, initially to help human editors recommend books from their huge library. The machine learning skills developed internally has later been turned into a web service for developers as part of the Amazon Web Services (AWS) proposition, among other applications. At Amazon, everybody is part of a team responsible for value creation. Their job website is explicitly recruiting people for teams and they show applicants what it is like to work in a particular team. Amazon fully uses the diversity in backgrounds and perspectives to improve their value propositions and invent for customers. Teams are truly in the lead to drive value creation for customers and as such see the direct impact of the work they do on customers.

4. Future Trends in Retail Business

The future of retail however is not a mystery, it's simply a continuation of trends already in motion (Spencer 2018).

- Store closures will accelerate
- Consolidation and Merger & Acquisitions will increase
- Mobile payment will accelerate a cashless economy
- Brick and Mortar experiences evolve
- Can Google Express become relevant VS Amazon Prime with voice activated shopping?
- Generation Z become voice search natives
- Retailers sync with millennial values (millennials are seeking for educational insights and add-value experiences on-site)
- Mastering offline shopping experiences
- Robotic retail will scale
- Retailers need to migrate from Email to SMS
- Checkout will become obsolete
- Mobile Augmented Reality (AR) becomes a channel for retailers

Grocery Retail Trends:

Retailers have been dealing with constant change for decades and if anyone has earned a break, they have. But the reality is that the change and the challenges are not going to stop anytime soon. If anything, the competition will just get tougher (Sevelius 2019).

E-Commerce keeps growing:
Shoppers have become used to fast home deliveries and click and collect options. The problem is not that many retailers have not managed to meet customer expectations, it is that many have not been able to do it in a profitable way. Part of the problem is that picking and last-mile costs have tended to eat heavily into profits. The good thing is still that more and more retailers are looking at automated options for picking and fulfilment.

Freshness, convenience and ready-made foods:
Convenience, takeaway food, meal kits, and ready meals are also a growing trend together with online grocery shopping. These trends are throwing grocers into competition with the food service sector as well as with each other as grocers are battling to optimize fulfilment and provide flexible delivery options. One challenge is that grocery does not lend itself to delivery as easily as food service. There are considerable additional picking and transport costs while food service outlets have benefitted from opportunities like Uber Eats.

Sustainability and ecological choices:
Interest in sustainability and concern about consumer behavior's impact on the environment was a major trend in 2018 and will be even more so in 2019. This will bring huge changes to retail as consumers increasingly care about making ethical, sustainable and ecological choices when they buy. Millennial consumers are also increasingly influencing the way we eat, making healthier choices, many of which reflect their concerns about sustainability and the environment, including shopping for organic produce.

Workforce management and finding talented employees:
The US unemployment rate is at a 48-year low. Businesses, especially in the retail and hospitality sectors, that want to attract and retain both permanent and seasonal workers, are offering higher wages and perks and are even trying to tempt recruits with hiring bonuses as they compete for talent.

5. Amazon Go Retail Expansion

Amazon is known to disrupted industries, starting with books back in 1994. The latest vertical is retail, and specifically the grocery industry. Amazon announced to plan 3,000 new Amazon Go stores by 2021 (Walton 2018). By beginning of 2019 Amazon already opened 10 stores over Seattle, Chicago and San Francisco (Amazon 2019). It is a multi-channel segment, where all big players are investing huge sums to improve customer experience, via digital platforms, better delivery options, or the increased integration of technology into the shopping experience. The average American is visiting the supermarket 1.6 times per week on average. After Amazon bought Whole Foods for $ 13.7 billion in August 2017, it has become clear, that the future of grocery industry will change (Ladd 2018). Grocery retailers can close the technology gap with Amazon, by turning their existing stores into smart "Amazon Go" stores. The company Trigo Vision enables retailers to transform. They supply all the technology and all traditional retailers can start offering this seamless shopping experience immediately (trigovision.com). Based on the study research two possibilities are pointed out:

Amazon Go Store Increase to 3,000 by 2021:
Based on digital experience and data Amazon can roll out a massive number of Amazon Go stores. Therefore, some points are to consider:
• Improve the technology (do not bring the check-out queue in front of the building as a check-in queue) and the anti-theft algorithms.
• Be quick, as companies are offering similar technologies to retail competitors.
• Use customer and product data to create a unique shopping experience (advantage compared to competitors).
• Based on real time customer and product data, Amazon can control supply and demand, as well the selling price, in real time, which can create an immense monopoly (what about ethics, legal aspects and fairness?).

Focus on Online Grocery Shopping and New Service:
The customer experience is for Amazon one of the highest values and fixed within the strategy. Instead of investing the money into 3.000 physical stores, it would be more customer centric to reinvent the online food shopping and delivery. Who wants to go to a grocery shop to buy milk? If Amazon invests in an online food shopping and delivery service, it will destroy the existing grocery retail shops. There will be no need for companies any more to invest into physical stores. Food can be distributed directly from central warehouses to the end customers house. This is even more convenient, faster and cost saving. As Amazon is excellent in optimizing cost for the warehouse process and delivery, the food concept will participate from existing processes. Based on real time customer and product data, Amazon

can control supply and demand, as well the selling price, in real time, which can create an immense monopoly (what about ethics, legal aspects and fairness?).

Overall this study generates a lot of ethical questions about monopoly and market control for the future.

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