POLITECNICO DI TORINO

Master of Science in Management and Engineering

Master's Degree Thesis

Design of Amazon's Transportation Strategies to change the status quo

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Introduction

Our society is living in continuous change due to, mainly, globalization. Indeed, 21st century markets and businesses are a clear example of innovation and adaptation to new trends and practices. Markets are becoming more volatile and unpredictable. In fact, not only tech-companies but also traditional companies which are able to adapt their business to new technologies are gaining influence and value year after year. One of the company industries in which this is occurring to a greater extent is in electronic commerce, also known as E-commerce, which refers to the exchange of goods and services through the internet. It has been one of the fastest, if not the fastest, growing industry in the last decades; leading companies are increasing its total revenues thanks to the adoption of this technology.

The best example of this type of companies would be Amazon.com, the biggest e-commerce company in the world and the second largest firm by market capitalization, after Apple Inc. Amazon started as an e-commerce website where you could buy books and have them delivered to your house with a few clicks. Their rapid success allowed them to expand in almost all possible business lines with what seems a never-ending growth of more than 20% per year, something that is almost unthinkable.

Unsurprisingly, as other companies saw the impressive growth Amazon was having (and still is), not long passed before they began their journey into the e-commerce world. However, Amazon still is the leading company in the sector despite other incumbents' efforts. Along the way, Amazon has innovated in many different areas to get a competitive advantage, but the area that the present thesis will focus on is in logistics, specifically, transportation. In this regard, one of the ways Amazon has made an impressive difference is with services like free two-day deliveries, free returns, free 2-hour deliveries in some cities, and many other services that always leave them 2-steps ahead of the competition.

This research is about understanding the techniques and strategies Amazon has implemented to their logistics in the transportation service and an exploration of what could be possible strategies from the point of view of Amazon in order to maintain their competitive position as the leading company in the e-commerce industry.

Focusing on one of the areas of major influence for e-commerce and new technologies, as logistics is, will display the link between a good strategy implementation in this field and the company's business success. It is important to understand how crucial it is to manage the decision and implementation of a transportation strategy for Amazon to compete in the e-commerce globalized environment, as many factors must be considered and the potential impact it has on customers and, as a consequence, business success.

The present study is organized into seven Chapters, in which the reader will find information and support to understand the development, results, and conclusions obtained. The first chapter provides a theoretical framework on the tools that will be applied for strategic analysis to offer an academic context of the subject. The second and third chapter presents the company to provide contextual elements of the case situation. The fourth chapter presents the development and application of the tools in the case company and the explanation, specifically, the external analysis. The fifth chapter explores the internal analysis. The six chapter exposes the creation of the possible strategies and direction that the company must take based on the findings from the previous chapter. Finally, the last chapter provides conclusions and benefits for the topics studied.

Chapter 1Theoretical Framework

This chapter presents the theoretical background that will be applied in the following chapters of the thesis. The chapter will focus on the tools that provide deep strategic insights from a company's perspective and from the outside. The models presented can be segmented according to their scope:

a) Internal and External: SWOT.
b) Company's External Analysis: PESTEL, Porter's Five Forces.
c) Company's Internal Analysis: V.R.I.O.

The strategic process that a firm goes through involves internal & external analysis, evaluating the strategic decisions to be taken based on the qualitative analysis previously done for, lastly, tactical implementation.

1.1 SWOT

SWOT framework is a strategic tool that was first used during 1960 and 1970 by Albert Humphrey to analyze the Fortune 500 companies; however, the creator of the tool is yet to be discovered. The idea of the tool is to evaluate a company's competitive position and to develop a consistent business strategy by considering four factors: Strengths and Weaknesses (internal factors of the company), Opportunities and Threats (external to the company). The advantage of the tool is that, with simplicity, it identifies the direction a firm needs to take to enhance its current situation.

- Strengths (internal factor): they refer to what makes the firm better than the competition, what are the processes that a firm does that makes it be in a better position in a certain area. Factors can be knowledge, high customer loyalty, special contracts with suppliers, distribution channels, patents, etc.
- Weaknesses (internal factor): these describe the elements that the competition is doing better than you do and put you in a competitive disadvantage. The idea is to identify the factors that prevent a company execute activities at their optimum level. The questions to be asked here are of the kind: what can be

improved? What factor is making us lose growth? What do external people perceive as a weakness of the firm when they compare with the competition?

- Opportunities (external): these describe external factors that a firm can benefit from, making the business grow and get a competitive advantage. Examples can be new trends, new markets, changes in policies, technology, among many others. The kind of questions that describe the Opportunities: what are the current trends affecting or business? Are there opportunities in another market? What are the changes in the population profiles? Is there any new technology that can help our business grow?
- Threats (external): they refer to factors out of your control that can potentially harm the firm or a project. Since they are out of the control of the firm, the idea is to define contingency plans to be prepared in the case the threats materialize. To identify the Threats the proper questions are of the kind: what external factors can place the company at risk? What are my competitors doing? Are there going to be new entrants in the market? If so, will they do better than we will? Will raw material cost increase?

SWOT analysis serves as a starting guide to establishing strategic decisions at a specific segment level and at a company level. That being said, its benefit can be even higher if used combined with the other strategic frameworks, such as the PEST, Porter's Five Forces or Value Chain Analysis. When used together, they can help completely framing macroeconomic, external and internal factors that might harm or benefit a business.

1.2 PESTEL

PESTEL analysis is a tool used to explore the macroeconomic forces that an organization is facing and based on this, support the strategic decision-making process. The key drivers that the framework explains are Political, Economic, Social, Technological, Environmental and Legal. The advantages of this tool are that it provides high decision-making support, a deeper understanding of the business environment, it does not cost money to perform, simplicity in its use (straightforward), reveals potential threats, among others. The outcome from this tool can and should be used to along the SWOT's Opportunities and Threats.

- Political: these determine the extent to which the government and its policy intervene on an industry or the economy. This includes political stability, tax policy, labor law, restrictions and so on.
- Economic: these factors involve the macroeconomic scenario that is surrounding the industry and the organization, which has an impact on its profitability. They include economic growth, employment and unemployment rates, foreign exchange rates, tax policy and interest rates, among others.
- Social: these refer to the social environment and the emerging trends that surround it. Each population segment that a firm target might have different behavior, so a good understanding of the customers is imperative. Factors here include demographics, literacy levels, education level, population growth, career attitudes, cultural trends, people preferences, etc.
- Technological: these factors take into account the rate at which technological innovation can bring changes or even disruption into an industry. The typical factors include technological changes in logistics, distribution, production, research and development, automation, communication, etc.
- Environmental: these factors include all the possible impacts that a certain process can have on the environment. Since nowadays there is pollution and carbon footprint targets set by the governments, firms must be aware of how their business affects the surrounding environment.
- Legal: each market where a firm operates has different legal rules that might change the way in which business operates. In some territory, some way of doing business is legal while in other it is not. Factors include consumer law, product safety, advertising standards and employment legislation, among others. While it is similar to the political factors, the difference is that government policy is what leads the political factors while legal factors must be obeyed.

1.3 Porter's five forces

Porter's five forces framework is a tool created by Michael Porter in 1979 to analyze a company's attractiveness, positioning in the market and likely profitability. The framework suggests five forces that define the competitive intensity that the company faces, which goes beyond the rivals, analyzing other factors that can affect the industry environment. Depending on this, their possible attractiveness, in terms of profitability, is established. This simple, yet potent tool is a key driver to identify where to drive the corporate strategy.

In this context, the five forces are:

- Competitive Rivalry: the idea of this force is to look at your competitors and see how you measure against them. Do they have lower costs? Do they offer better quality products? How do the customers perceive their product against ours?
  When this factor is high, it means that rivalry is intense and that other companies offer distinct services that represent difficulties for companies that want to differentiate themselves. Usually, a high degree of rivalry is characterized by firms that are in economies scale, which increases price competition, leading companies trying to attract customers with price cuts; lowering market concentration (number of firms), diversity of competitors (in terms of goals, cost strategies) and product differentiation.
  Contrarily, when the rivalry within an industry is small, the path is clear of obstacles and a company is likely to have profits since they are the only ones that offer a determined service.
- Bargaining power of suppliers: described by the availability for a given company to find suppliers with easiness. When a company requires inputs such as raw materials, components or any kind of contributions for their final product/service, they search for a provider/supplier. How many potential suppliers does the company have (supplier to firm concentration ratio)? Do they provide something unique (differentiated input)?

The more suppliers you have offered the same service or products, such as commodities, the lower their bargaining power will be since a company can easily switch to another supplier that offers the same product for a lower price. On the other hand, if an industry is depending only on a few suppliers, the situation is the exact opposite and they can just charge higher prices or switch easily firms since they have low switching costs.

- Bargaining power of buyers: refers to the extent to which buyers are able to influence the profitability of an industry. How easy can they drive the prices down? What is the size and concentration of buyers relative to the sellers within the industry? Do they have big or small switching costs?

  If a company's revenue depends on a few buyers, they will have the advantage to bargain for lower prices since they represent a big part of the revenues. Also, if buyers possess valuable information on price, costs, performance, and quality of the product/service; they will know if what they are buying is worth the asked price and can switch or negotiate based on this.

  Alternatively, when there are many buyers within an industry, or the input they need is critical and unique, their situation is the other way around, and they are no longer in control of negotiation that might happen.

- Threat new entrants: usually, industries that are enjoying higher than average returns attract firms. Consequently, more firms in the market will drive profitability down since competition will be more intense than before, making firms add extra value to their customers in terms of lower cost or more differentiation. How can a firm's position be affected if there are newcomers? However, there are numerous factors that make harder the entrance of new companies, which are the barriers to entry: capital requirements (high investments to enter in the industry), economies of scale of the incumbents, how ahead are the incumbents in the learning curve, customer loyalty, product differentiation, patents, know-how, favorable agreements with suppliers, regulations, retaliation, among others.

  If a firm is able to enter a market and compete effectively without much retaliation, then competitors can rapidly enter the market and deteriorate the firms within the industry. If there are solid and durable barriers to entry, then the firms in the industry can be more comfortable and enjoy their current situation.

- The Threat of Substitution: substitutes are products/services that are not considered as actual competitors, but they play an equivalent role for the customers since they solve the same need but using a different strategy (for example, taking a high-speed train as a substitute for an airline company).
  The pressure coming from this type of products/services depends on several factors: customer's propensity to substitute, the price/performance of the substitute, customer's switching costs, number of substitutes available, perceived quality of the substitute, etc.
  If the substitution is not expensive and it is easy to perform, an industry's current position can be easily destabilized, damaging the entire profitability.

Bargaining power of suppliers, buyers, and the competition rivalry are called the "Vertical Forces" of Porter's model, and they represent the value chain structure within the industry. The "Horizontal Forces" refers to the intensity of the competition in the relevant market and it is composed by the threat of new entrants, threat of substitutes and the competition rivalry.

1.4 VRIO

VRIO Framework is a tool created in 1991 by Jay B. Barney. His objective with the tool was to analyze a firm's internal resources and capabilities to assess their competitive advantages or weaknesses and to develop strategies based on this. VRIO is an acronym that comes from the four dimensions that, according to Barney, explain the company's capabilities; these are V for Value, R for Rarity, I for Imitability and O for Organization. VRIO analysis is used as a complement to the PESTEL analysis and Porter's five forces to analyze a company's external environment.

Barney states that for a company to have a sustained competitive advantage, their resources must be valuable, rare, hard to imitate and the organization must be able to exploit this resource. The analysis starts in the following order: value, rarity, imitability, and organization.

- **Value**, the first analysis of the framework starts questioning if a particular resource enhances the value by enabling a firm either exploiting opportunities (like growing perceived customer value through differentiation or lowering prices) or defending against threats (suppliers, substitutes, buyers, entrants). If the answer is yes, then a resource is valuable. On the other hand, when the resource does not do any of the above, it is a weakness. It is important to note that the value of a resource is not the same for long periods since there is a constant change in the internal and external conditions (demographic, technological, cultural, legal, etc.) that can make the value less or more valuable than it is.

- **Rarity,** the next question to ask if whether the resource or capability is unique to a few firms or if it is common. When any firm easily acquires a valuable resource, then it is no longer considered a competitive advantage since anyone can have it, and it leads to competitive parity (same results as the others in the industry).
  Alternatively, when a firm has a rare and valuable resource, it has a temporary competitive advantage over the others. When a firm has resource/capability that is valuable and rare, it can become a permanent competitive advantage depending on the next two factors, imitability, and organization.
- **Imitability,** even when a firm's resource enjoys the two previous qualities, it is highly possible that it will not give the firm a competitive edge over others if this resource is easy to imitate. As soon as the firm with the valuable and rare resource starts enjoying better than average profits due to the temporary competitive advantage, others will realize what is happening. Consequently, they will immediately try to replicate/substitute the approach seen to gain a better position for finally balancing the industry.
  On the other hand, if a firm has a hard to imitate resource because of different reasons (patents, know-how, low-cost access to special inputs, etc.), it can be almost considered a core competence and a competitive advantage, if only if the firm is organized to capture the value that the resource can offer.
- **The organization,** when a resource is identified as valuable, rare and not imitable, the last step requires asking if the firm is internally able to exploit the resource. Factors such as the internal management systems, processes, structure, approach, internal and external consistency and compensation policies. Finally, if everything is in place, the firm can enjoy a sustained competitive advantage for a long period.

Lastly, when a resource is not valuable, the company is at a competitive disadvantage. When is valuable but not rare, the company is in competitive parity (average results of the industry). Next, when the resource is valuable, rare but easy to imitate; the company will enjoy a temporary competitive advantage until the others copy or substitute it. When the resource is valuable, rare and is expensive to imitate it, but the firm's organization is not able to capture its value properly, the resource becomes not correctly used and the competitive advantage is bringing the benefit it should. Finally, when the firm's resource succeeds in having all the qualities and the firm is internally prepared/organized to exploit it, the resource becomes a sustained competitive advantage and a core competence.

Chapter 2 Theoretical Background

2.1 Company presentation

The company in which the present thesis was developed is called Amazon.com. It is an electronic commerce (e-commerce) business that focuses on providing retail and cloud computing services in the world. The company is, as the time of writing, the second most valuable company in the world after Apple, with a total market capitalization of $894.5B. They are currently established in 13 marketplaces: the United States, the United Kingdom and Ireland, France, Canada, Germany, Italy, Spain, Netherlands, Australia, Brazil, Japan, China, India, and Mexico; and are also able to ship internationally some of the products to other countries.

Initially, the company was focused on selling books but then they diversified into different business segments like toys, health, personal-care, jewelry, electronics, watches, sports, games, apparel, baby products, and almost every segment possible. Also, after having a recognized brand name, the company started making exceptionally cheap and high-quality products with brand name Amazon Basics, and they offer everyday items like cables, batteries, home necessities, backpacks, office accessories and more.

In addition, Amazon is also a parent company of more than 40 subsidiaries, among them Whole Foods, IMDb, Zappos, Twitch, and more.

Amazon.com has approximately 576,000 employees that work in all type of areas, such as design, research & development, product development, manufacturing, finance, engineering, and sales. It is a company that is characterized by being highly innovative and customer oriented, always looking for better solutions in the industries where they are in.

Amazon's vision is "to be earth's most customer-centric company; to build a place where people can come to find and discover anything they might want to buy online". Consistently, the company has 14 leadership principles, with the number one called: "Customer Obsession", which means that the work always starts with the customer and then go backwards, keeping their trust and "obsess" over them.

The present thesis was developed at the company's European headquarters located In Luxembourg City, Luxembourg.

Figure 1 Amazon's Marketplaces

2.2 Amazon.com History

On July 5 of 1994, a former investment banker named Jeffrey Bezos founded Amazon.com, originally known as “Cadabra”. The electronic commerce company was founded in the garage of a house located in Seattle to, initially, sell books. This is what it looked like on the very first days:

Figure 2 - Amazon initial website

The business model designed in a napkin by Jeffrey Bezos, called the “Amazon flywheel”, sets the principles that have driven the company to their successful status.

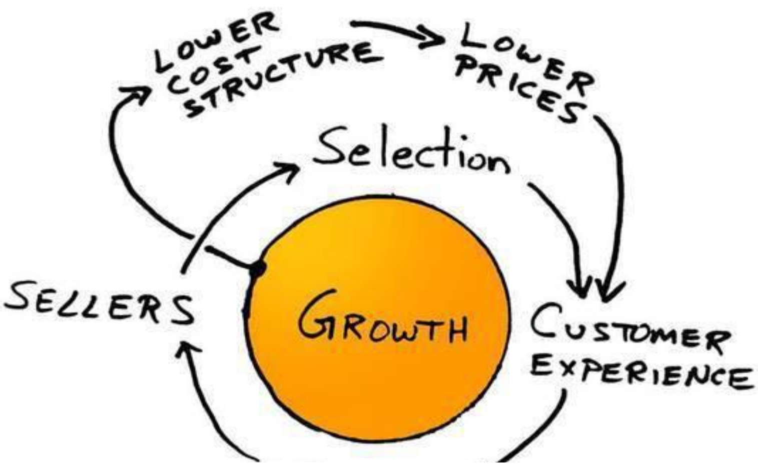


Figure 3 - Amazon Business Model

The idea is to keep feeding any area of the flywheel to hasten the loop and keep it running as fast as possible.

Amazon's growth is based in a cost leadership strategy (establishing a competitive advantage by having the lowest operating cost in the industry), where lower prices enhance the customer experience since everyone is always looking for the place that sells the good they desire at the lowest price possible, and as a result, drives more distinct customer visits, that is, traffic. More clients increase sales volume which at the same time, attracts third-party sellers to the site to profit from the large clientele. What happens next is that if more sellers are subscribed to the site, the "selection" increases. In other words, the number of distinct products that Amazon has available to offer to the customer increases, which drives furthermore the customer experience since they can find everything they are looking for in the same place for an even cheaper price than before because, if they have more products in the warehouse, it allows them to decrease the fixed costs over the greater selection.

This simple, yet powerful business model was so successful that after the first two months going live, the website was already selling to all 50 states and over 45 countries, it was already making more than $80,000 a month with more than 2000 daily visitors. By the end of 1995, the company made more than $500,000 in sales. In no time the company was such a huge success that many investors were trying to get involved, so in 1997 other milestones are conquered: expansion in the UK and goes public with an initial public offering of $18 per share for a total market capitalization of $438M.

Later in the early 2000's the company was already established in Germany, France, and Japan. After surviving the dot.com bubble, in 2002 they expanded to Canada and also launched their Cloud Computing Services, Amazon Web Services (AWS). Not long after that, they acquired a company in China named Joyo.com, which later became Amazon China (2004). Simultaneously Amazon announced it will establish their European headquarters in Luxembourg. Then, in 2005 Amazon launches its now worldwide famous service Amazon Prime, offering for the first time in the world free two-day shipping.

After this, in 2007, Amazon already having recognition started launching their own products, the first one was Amazon Kindle, a tablet which allows reading and buying books through an electronic store with thousands of options available. In 2010, expansion occurs in Italy and the company stated that for the first time, the number of books bought through the Kindle outnumbered the hard-cover books, which became a big milestone for the company.

Then in 2011, they expanded to Spain and also acquired Amazon Lockers, a self-service delivery service that allows you to send a package to a location which is not your house (the lockers), for customers who were not usually at home could pick up the products when they were able to. Shortly after (2012) Amazon acquires Kiva Systems, a company dedicated to making robots, which later became Amazon Robotics, for the purpose of optimizing warehouse working times and improving the efficiency in the activities.

In 2013, Amazon expanded internationally and started operations in India, Australia, and Mexico. Later. In 2014, the firm started the service called Prime Now, which delivers free shipping in two-hours for certain specific cities.

Next, in 2016, Amazon starts making their first drone deliveries in the UK, called "Amazon Prime Air", capable of delivering in less than 30 minutes. Later in 2017, the company's growth has made them look for the second headquarters in the United States which still is under development.

Finally, in 2018, the company has more than 100 million Amazon Prime members, 566000 employees (2017) and it is valued as the second largest company in the world in terms of market capitalization.

2.3 The principles

The first letter to shareholders was made in 1998 along with the company public results, and it is now copied every year in the company's annual report. It gives great insight into the type of leadership the fast-growing giant had and the plans for the years to come. In total, Amazon has 14 leadership principles that all the employees follow and live by. However, there are two principles that are more prioritized than others, and the letter stated these, which form the basis of how the Amazon community operates:

1) Customer Obsession

“If you’re customer-focused, you’re always waking up wondering, how can we make that customer say, wow? We want to impress our customers — we want them to say, wow. That kind of divine discontent comes from observing customers and noticing that things can always be better”

Coherent with the business model, at Amazon one of the strongest pillars you are taught is Customer Obsession, everything you do starts with the customer, who is not only the final client but almost everyone you interact within the organization. The company has a strong culture concerning always starting to do activities working from the customer backward. This means, thinking about what he would like, which is the best way to offer him what he desires, innovating on his behalf to lastly design a service/product to satisfy and exceed his expectations.

2) “It is all about the Long Term”

In this first letter, Jeff Bezos stated that one of the fundamental value proposals Amazon would make was to have everything aimed at the long-term benefit, in his own words (Bezos, 1997):

“We believe that a fundamental measure of our success will be the shareholder value we create over the long term. This value will be a direct result of our ability to extend and solidify our current market leadership position”.

Amazon.com is a company that is always focused on the long-term even if it means sacrificing short-term gains, through its history it has been constantly stated that every action that the company has taken may not have a direct impact at the time when it’s made, but after months or even after years. Employees are taught that every decision they make must never compromise the long-term goals.

Just to name a few, illustrative examples:

- Amazon Prime, this service that was founded in 2005 offers, for a flat annual fee, unlimited free delivery to the customer in two days if the product is available; and for years nobody knew about this service because they did not have much availability until the infrastructure they built was so massive that they could deliver almost everywhere in less than two days. The growth of

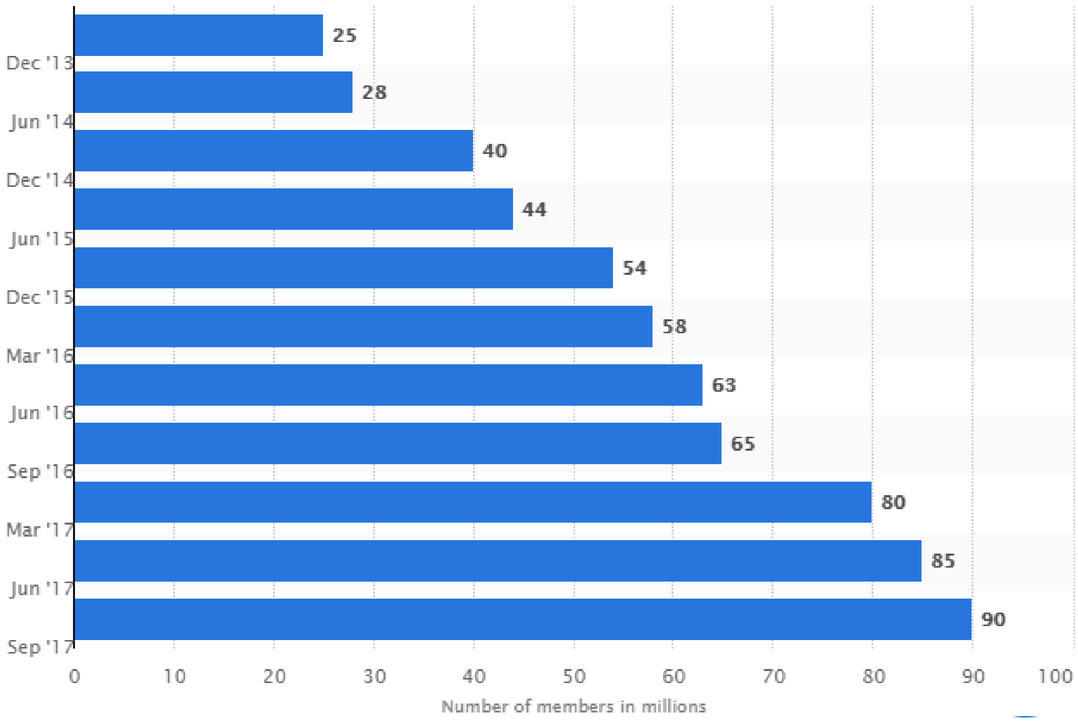


Figure 4 - Amazon Prime members

the service in the last years has been enormous, from 2014 to 2017 the company almost quadrupled the total users, from 25 million customers to 90. million.

Obviously, they could get more money if they just charged the normal transportation fee, but for them, this was not important because, in the end, they were searching for brand loyalty and customers satisfaction. Ultimately, it led to a non-surprising result: Amazon's shipping expenses increased, but revenue soared so much more that it more than paid off, a prime customer spends more than two times that of a non-prime one (Sterling, 2017). What at first was thought to be a bold bet from the beginning, turned out to be one of their most successful innovations.

Now it includes even more services associated with the membership: Amazon Video, Amazon Music, cloud storage and more.

- Amazon Fresh: Fresh delivery food business, launched in 2006. A dangerous move since fresh food must be delivered in a quick time. This means high shipping cost to provide a high-quality service. This service has struggled and has even been closed in zone areas.
- Prime Now: Introduced in 2014 (US), a service that offers free two-hour delivery to Amazon Prime members on more than 25000 products and it is still growing. But how can this possibly be profitable? This is a massive game changer for the e-commerce industry but relies on an important factor: the shipping industry. How can they control the costs associated with the service? Partly, it is not profitable in the sense that they make more revenues doing this type of deliveries, instead, they make more losses on shipping cost since for this type of deliveries they use express carriers (a third party who delivers customer orders on Amazon's behalf), which are normally the expensive ones. But then again, it all falls back to the business model, you are throwing a huge buff in the customer experience which makes the wheel spin faster and faster and thus having a positive impact.

  It is not difficult to verify this, if we look on the third-party sellers share growth for the past years as a sample:

Third-party unit sales as share of total units

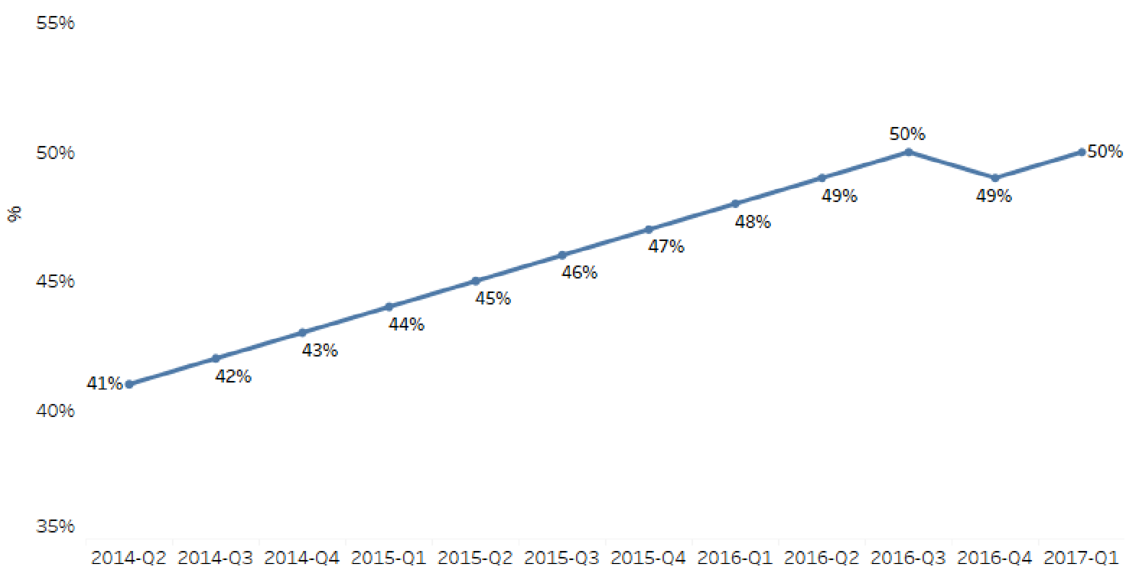


Figure 5 - Third-party unit sales as a share of total units

This graph shows the units sold by the third-party sellers as a share of total units sold by Amazon, and it is clear to notice the upward trend it has, meaning that indeed more sellers have been attracted to Amazon selling their products through the website each year, making the "flywheel" spin faster.

Amazon's successful strategy has been reflected in the revenue, which grows at an outstanding pace, 28% compounded since 2004.

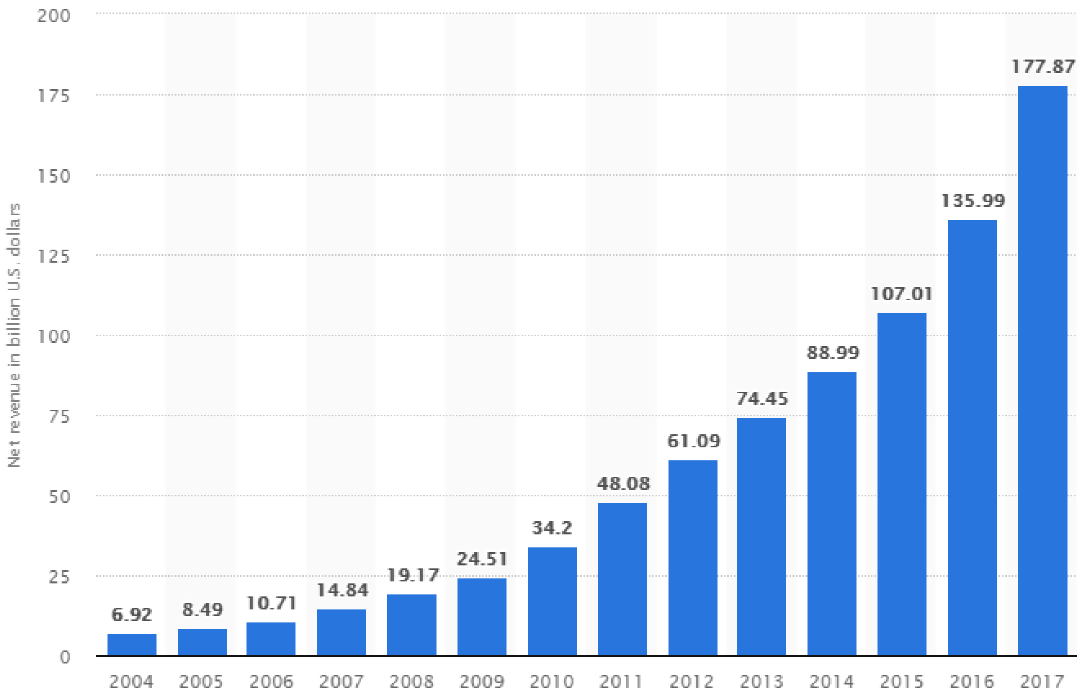


Figure 6 - Amazon revenue from 2004 until 2017

So far, the basis of Amazon's growth is the following: enhance the customer experience, ship faster and make them pay almost zero for the shipping. While this is good for the customers, is it for the company? With services like Amazon Prime and Prime Now, the company is delivering to the customers so fast but gets no income from the shipping. The chart below shows how the spread between the shipping cost and the shipping revenue has widened considerably during the last years.

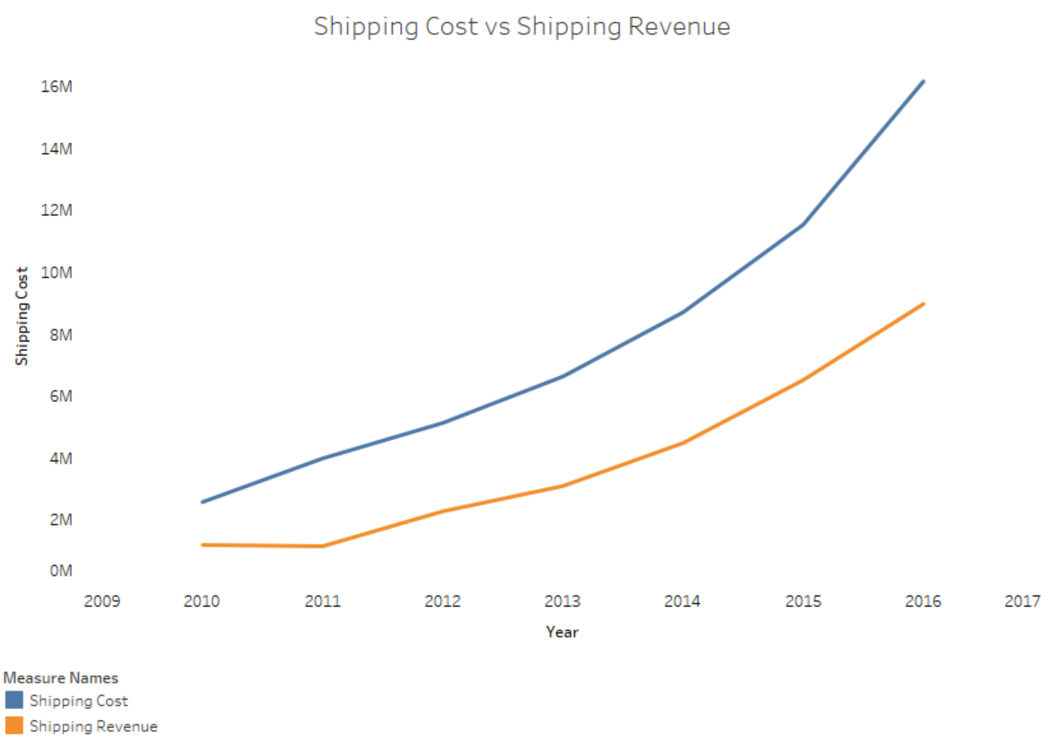


Figure 7 - Amazon's shipping cost and shipping revenue since 2010, in billions.

We can also see how the net shipping cost (that is, Shipping revenue – Shipping cost) as % of total revenue has risen the past years, to a point where the company is not disclosing anymore the shipping information in their annual reports.

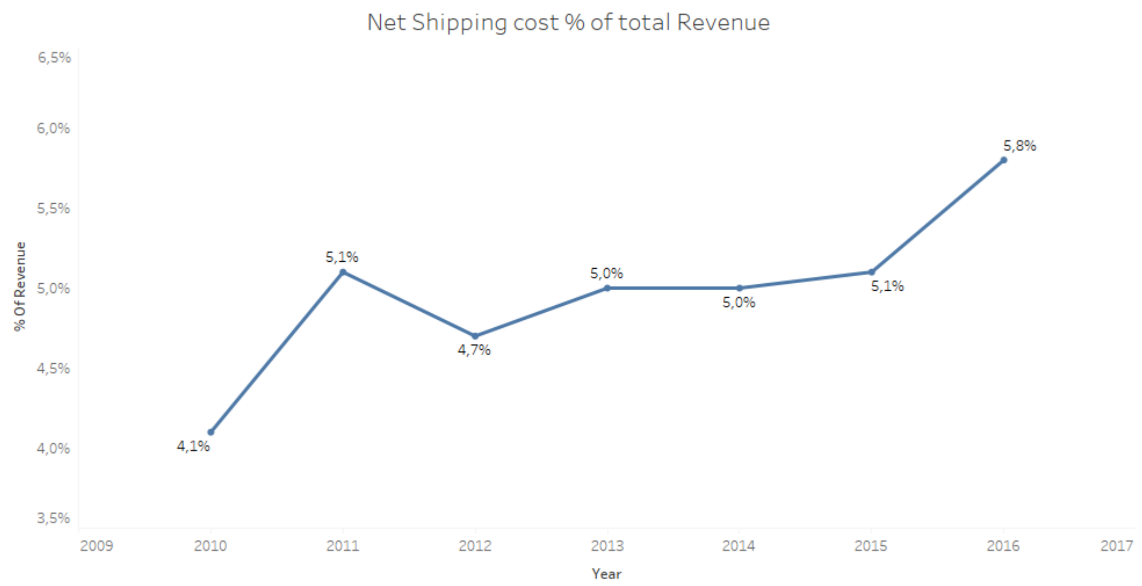


Figure 8 - Shipping cost as a % of Total Revenue

In the chart above, from 4.1% in 2010, the % grew to 5.8% in 2016 of net shipping cost, keeping in mind that 5.8% in 2016 is $7.8 billion vs $1.4 in 2010; and the tendency is that it will still grow more.

This leaves us with the inquiry, what is Amazon doing to mitigate this situation? What are the strategies that they are implementing or can be implemented to help lessen this cost while maintaining their delivery promise? For sure they need long lasting carrier relations, control costs plan, challenges and ideas that help the main objective to reduce cost without compromising the customer satisfaction.

2.4 Objectives of the Thesis Work

The thesis work is developed during an internship program, in which the main objectives were: (1) understand and report the performance of Amazon's Outbound Transportation costs in Europe's Marketplaces; (2) provide and create saving opportunities based on the data; and (3) to propose improvements by developing automatization of the reports the company is currently using. Grounded in these objectives, the thesis aim was defined.

Consequently, the scope of the thesis work is defined by the following objectives:

- Analyze Amazon's Transportation current strategic position in the market, exploring the competitive advantages, and their weaknesses.
- Assess the possible future opportunities and threats that may arise.
- Based on the strategic analysis, identify and elaborate strategies to face the actual and the upcoming challenges.

Chapter 3Transportation model

To be able to understand how Amazon treats the transportation costs, first it is imperative to understand how the shipping cycle works.

The process starts when the customer makes a purchase in the marketplace (e.g. website: amazon.fr) and selects among different delivery speed options depending on his interest. After this, an internal Amazon algorithm selects the warehouse that can meet the promised delivery date requested by the customer. After the warehouse is selected, the associates are informed about the order in place and they search for the product and pick it. Then, the product is sent to a conveyor belt to be scanned and packaged. When this is done, the final part, called “SLAM”, happens. The belt goes through a machine which measures the weight of the package and also stamps the delivery address of the product.

The packages are checked and sorted (classified) depending on the selected places they are going and finally loaded into the relevant truck. The package is then shipped to a hub, where the carrier comes and picks the package to make the delivery. Simultaneously, two things happen:

1. The cost associated with the package including all the variables (weight, dimension, customer destination) is calculated and manifested to the database.
2. An email is sent to the user saying that the package is being delivered and estimated time of arrival of the product (that ideally, and normally, matches the user’s request made at the time of the purchase).

Lastly, the package arrives at the destination and, if everything went according to the plan, the customer is pleased with the service.

When the package is sent to a hub, it is already taking into consideration which carrier will pick up the package and make the delivery. This also includes sometimes the carrier’s hub, and since a carrier has more than one hub, the process sometimes can be more complex. Carriers can have a national hub, regional hubs, and delivery stations.

The national hub is where packages are initially sent to be sorted and distributed to the next regional hub, which is a more local and smaller warehouse. Then, in the regional hub, again package sorting occurs but this time to be sent to the last station, which is the delivery station/depot. From this point, sortation is no longer required, and the package is sent to the customer.

The scenarios that can happen when Amazon sends a package from its warehouse are three:

1. Delivering to the first hub, which is the national one. After this, the carrier takes care of the package, and then goes to the regional hub, next to the delivery station and after that, the customer.
2. Delivering to the second hub, which is a regional one. After this, the carrier takes care of the package which goes directly to the next station. After that, the customer.
3. Delivering directly to the delivery station. The carrier picks up here and goes directly to the customer. This is called Postal Injection.

In terms of cost, Amazon gets charged less in the following order 3>2>1. The reason for this is that the carrier incurs in less step in the process and doesn’t do the sortation and delivery to the regional hub or the delivery station, and only takes care of the last mile delivery.

Chapter 4 External Analysis

In this section, the thesis will expose the environmental factors that are out of control for Amazon to manage and that are currently affecting their business. The external analysis is important because it supports the company to develop strategies according to what is happening, and it allows the firm to understand deeper how to optimize their output. In addition, the decision-making process done my management is, if done a proper external analysis, more precise because they will know how to direct the competitive advantage of the firm to enhance it or sustain it. Strategy frameworks will support the analysis for a better comprehension and segmentation of the different issues surrounding the firm. Specifically, PESTEL, Porter's Five Forces and SWOT (both external and internal) tools will be used.

4.1 PESTEL

4.1.1 Political

Since Amazon operates in different countries, they are subject to specific business regulations and laws governing the Internet, e-commerce, transportation, pricing, and other services. Right now, Amazon operates in United States of America, Mexico, Europe, China, India, and Japan; out of these regions, due to Amazon's rapid growth, some governments have started targeting the firm trying to create a more "perfect competition" environment. An example could be the recent comments done by the United States president Donald Trump in March 2018:

"I have stated my concerns with Amazon long before the Election. Unlike others, they pay little or no taxes to state & local governments, use our Postal System as their Delivery Boy (causing tremendous loss to the U.S.), and are putting many thousands of retailers out of business!"

"Why is the United States Post Office, which is losing many billions of dollars a year, while charging Amazon and others so little to deliver their packages, making Amazon richer and the Post Office dumber and poorer? Should be charging MUCH MORE!

These and many other comments have suggested that the president may exercise his power to attack Amazon with regulating laws to try diminishing the demand for their products and services and increase their cost. This can hugely affect their business in the USA, and the fact that Amazon's retail business (excluding AWS) is only profitable in the USA could mean a huge effect on the consolidated income if it were to be regulated in the USA (see table #).

	Year Ended December 31,		
	2015	2016	2017
Operating Income (Loss):			
North America	$ 1,425	$ 2,361	$ 2,837
International	(699)	(1,283)	(3,062)
AWS	1,507	3,108	4,331
Consolidated	$ 2,233	$ 4,186	$ 4,106

Table 1 - Amazon Operating income by segment

Another country where their growth is significantly hindered by the political environment is the People's Republic of China (PRC) where Amazon is regulated by the government laws that do not allow them to exercise freely; i.e. to comply the local regulation requirements, Amazon is operated by PRC companies that are partially or completely owned by the government. In addition, there are other services that Amazon must operate in combination with other PRC companies because they hold the licenses.

Another big market is currently being stalled is India. the government restricts the control of Indian companies by foreign firms involved in online retail activities. Since Amazon provides logistics services to third-party vendors to enable them to sell online and deliver to customers, Amazon holds indirect interests in some of these third-party sellers and hence they are facing risks and challenges because of the government's restrictions to control Indian companies; not to mention that these laws are constantly changing, and it is difficult to predict what would happen over the next years.

In Europe, which had a stable political environment for international companies proportioned a good place for Amazon to grow and establish their business. Now, there is a big factor that can make a huge impact on Amazon, which is the Brexit. Since

Amazon UK represents one of the biggest marketplaces in Europe, if regulating and trade laws were to happen after the Brexit, it could affect in a tremendous way Amazon's business. For example, there is a chance that they will need to build more fulfilment centers in the U.K. and in the European Union because the orders fulfilled from the opposite region can be highly taxed if there are not appropriate treaties between them. Also, the hiring can be affected if the immigrants have a harder time to go to work in U.K. because of visa requirements and red tape. Only the announcement that U.K. was separating from the European Union was translated in a 30% weakening of the British Pound versus the Dollar and the Euro.

4.1.2 Economic:

As of now, Amazon is enjoying a flourishing economic scenario where their main marketplace, USA, has the strongest economy in the world (GDP $19.4 Trillion, +1.6% YoY). Since the 2008 crisis, the world has recovered and even reached all-time high records in some of their stock market exchanges. The economic scenario in the European Union also presents growth at a steady pace (GDP approx. +2.5% YoY since 2010). The other big markets, India and China are also growing fast even though China slowed down their growth was not sustainable anymore since there was a demand for higher wages that made the outsourcing of products more expensive than before (from +10% YoY from 1985-2015 to +6.6% the last years).

While now is the economic scenario is benefiting Amazon, it is worth noting there will always unexpected events that may change the current settings, such as an economic recession or the Brexit, that had a huge impact on the exchange rate of the British Pound and the stock markets. Because of this, Amazon is highly exposed to foreign exchange rate fluctuations because of their presence in many international markets which, when transformed to Dollar, operating results may diverge significantly from expectations, resulting in important gains or losses.

4.1.3 Social:

Currently, Amazon is viewed as a brand that has changed the world with incredible customer service and extreme convenience. The fact that people have become more demanding (they want products “now and cheap”) the last years have also made Amazon’s customer loyalty grow more because they are satisfying their demands and even adding more value to everything they do. They even surprise customers with the investment in services like Prime Now, delivering millions of products in less than two hours, that are making improvements in the number of items available, the number of cities where the service is provided, and more.

On the other hand, Amazon has also made people more sedentary because, since Amazon is also in the groceries business, they can now do all the shopping for fresh food from the website with the same price or even lower sometimes. But at the end, it is what people want nowadays, and all that Amazon has done is make their desires come true.

4.1.4 Technological:

Amazon is a company that is always trying to improve the way they meet the customers’ demands, and without their ability to adapt and embrace technology this would not be possible if they do not keep up with the latest technological trends they will be doomed for life. They started as an internet company using all the leverage they could, and they still are. Product-wise they are spending billions of dollars on artificial intelligence (AI), mostly directed to their famous virtual assistant Alexa, which now is capable of voice interaction, setting events, play music, do translations, setting alarms, playing audiobooks, and providing news of weather, economy, politics, etc. It is also capable of controlling smart devices using itself as a home automation system; now capable of changing heating, lights, cooling, home security, and more. For Bezos, it is one of the most important factors for the future. In his own words (Bezos, 2016):

“It's probably hard to overstate how big of an impact it's going to have on society over the next 20 years”

Delivery-wise they have managed to optimize the delivery service through technology in a way no one ever imagined, and they continuously try to innovate on behalf of the customer; an example for this is Amazon Robotics and Amazon Prime Air. The former being robots in Amazon's warehouses for, after a customer places an order, picking the product, packing it and get it ready for shipment. It is estimated that the time it took a human to do this was between 60 and 75 minutes, and the robot only 15 minutes. The latter refers to a service still in development, but it was first introduced in Dec 2016 to deliver products in less than 30 minutes through the use of unmanned material vehicle (also known as drones), currently it is stalled because of current airspace regulations but it is predicted to be fully active between 2019 and 2020.

4.1.5 Environment:

Amazon is aware of the global situation there is with the waste and the excessive use of nonrenewable energy and how it is damaging the environment. Hence, they started working towards a sustainable future with many projects to drive up the use of renewable energy, reduced waste, sustainable packaging, and more.

Some of these projects are about using renewable energy to provide their warehouse's energy needs. For example, as of May 2018, they are using solar energy panels for 17 fulfillment centers and they have a goal of being able to provide fully 50 fulfillment centers by 2020. Other projects are about using the most ecofriendly type of technology, such as LED lightning, efficient cooling and heating systems, and more.

Transportation-wise they stated: "Amazon is constantly working to optimize our network and drive efficiencies. This includes managing our own fleet of trailer equipment which is designed to minimize fuel consumption. In North America, our fleet includes a mix of trailers in different sizes that are equipped with skirts (panels attached to the lower side edges of a trailer to make it more aerodynamic) and automatic tire inflation systems that keep tires properly inflated and maximize fuel efficiency. In Europe we have deployed double-deck trailers, which increase the load capacity per trailer, reducing the total number of trailers on the road".

They also have a program to reduce waste called ”Frustration-Free Packaging Program” which promotes 100% recyclable packaging and to ship products in their own packages without additional shipping boxes. It is estimated to have avoided 500 million shipping boxes and have reduced packaging waste by 16%, avoiding 305 million shipping boxes in 2017 alone.

4.1.6 Legal

Amazon must comply with all the standard environmental laws, taxation laws and e-commerce regulation laws according to each marketplace they operate. For example, this means complying with carbon footprint levels, not doing tax evasion, establish a healthy competitive market, among infinite others.

In addition to the laws above, one has gained weight over the last years. In today's world, data is one of the most valuables assets a company can have but it is also one of the most dangerous ones because there is a big concern with firms being able to protect the information and the privacy of its customers. There was a recent case when the company Facebook was discovered giving private data to another company "Cambridge Analytica" that was running data analytics to help the President Trump's election campaign, which ultimately won the presidency. Because of this, Facebook's CEO had to go to court and now all the websites are obliged to secure privacy safety by complying with the new General Data Protection Regulation (GDPR) law or else they can face penalties of 4% of a company's annual revenue from the year before.

Hence, Amazon and any company must be aware of their legality concerning data protection, privacy, network security, encryption, among many others to secure the safety of the information of their clients.

4.2 Porter's Five Forces

4.2.1 The threat of new entrants

This force does not a represent a strong threat for Amazon's strategic planning since, due to a high number of factors, it is unlikely that Amazon's performance will be affected if there are new entrants in the online retail industry.

Several factors would suggest that Amazon could be in danger because of new entrants, for example nowadays it is cheap for customers to search on the internet for the cheapest offer on a product (low customer switching cost) or also now it is really easy to set up and online store and start selling products (low initial capital requirements). Even with that threat, this will not affect Amazon. Why?

Amazon has built strong barriers to entry due to the low-cost strategy approach they take. They have managed to lower the cost, thanks to high economies of scale, to a point where almost nobody can compete with them, let alone medium or small enterprises. Also, thanks to their experience and time in the business, they have been able to build strong carrier relationships, which lets them have an immense distribution network which further optimizes their delivery. Moreover, because of their excellent principle of "customer obsession", their customer experience is satisfied beyond comparison building strong brand loyalty.

In addition to this, if new entrants were to come, the retaliation expected from the incumbents would drive them away because they can even decrease the costs further or even to a zero-profit status just to force the entrant out, due to negative and unsustainable income.

4.2.2 Threat of substitutes

This factor represents a problem for Amazon in their strategy execution. Even if Amazon has a competitive advantage over many important elements, there are some areas where they can easily be harmed.

While Amazon leads to online retail business, the biggest substitute they face is the physical store business or the so-called “brick and mortar strategy”. Customer experience is also enhanced when they go to a physical store and have a pleasant time delighted by the infrastructure or the layout of the building (see IKEA case). In this case, Amazon’s physical presence was nonexistent until 2017 when they acquired the organic food company Whole Foods, but their presence is still relatively small in this field compared to other retail giants (Walmart, Costco, Carrefour, Schwarz, etc.).

Hence, although Amazon’s strategy does not consist in not a brick and mortar approach, they will always suffer from people who see shopping as an outdoor experience and prefer to shop in physical stores because they see their personal benefit higher than shopping online.

4.2.3 Bargaining power of buyers

This factor depends on two important drivers: the price sensitivity of the customer and his bargaining power. The combination of this two ends up being a high force (the customer has the power) for Amazon’s strategy execution.

The latter is strong for the customer because the digital advancement has empowered them in multiple aspects. The fact that the customers can choose from any e-commerce company to buy a product with almost no switching cost, just comparing among many options to find which one is the cheapest has given them tremendous power. In a more technical language, the factors that empower the customers would be their low switching cost and their high and easy access to information.

The former is between normal and high in terms of customer power. The reason for this is that, even though Amazon has managed to differentiate themselves through an excellent customer service and high brand loyalty, customers can find multiple offers for a product from different e-commerce companies. Hence, when the client is only looking for the cheapest offer, he does not care about the service, just about getting the desired product as cheap as possible.

4.2.4 Bargaining power of suppliers

This force is medium to high, depending on the type of business line. In the retail business, Amazon was highly dependent in the past for express carriers such as UPS, USPS, and FedEx to be able to deliver in the promised time to the client. When Amazon started growing, they began to have problems for various reasons with these carriers: the price they charge is quite high and they could not satisfy all the demand Amazon was providing them. Because of this, Amazon started relations with many private carriers that offered better rates and a healthy competitive environment was then established for all the carriers that deliver Amazon's parcels.

Even so, few carriers were the ones that could provide express (fast) deliveries with high success rate and a good amount of capacity (UPS, USPS, FedEx, TNT, DHL in Germany and so on). As a result, they were still charging expensive rates because they have the experience, the distribution networks, and the knowledge that lets them send packages quick.

Since Amazon was in a tough position, their ultimate decision was to create their own transportation carrier to depend less on others, and "Amazon Logistics" started operating. Although it is still new, and it is still in development, this decreased drastically the power the carriers had because now Amazon can decide –up to their own carrier capacity limit- how much volume to give to other carriers.

Thus, due to Amazon's investments, they have started to depend less on others and develop its own carrier to support his logistic needs with the growth they are currently having. The force is medium because Amazon Logistics is still in development and cannot handle as much volume as they would like to, but the situation can change soon.

4.2.5 Competitive rivalry

This is an intense factor, meaning that Amazon faces intense competition in all the different industries. Transportation-wise, many competitors have been around more time; like all the public owned companies (USPS, La Poste, Poste Italiane, etc.) and some private ones. They enjoy better resources, more experience, more customers, brand recognition, and more. They may be able to negotiate better deals with sellers, compete fiercely on pricing, and dedicate more resources to technology, infrastructure, fulfillment, and marketing.

As of now, the high barriers to exit that exist in the industry (due to non-transferable high capital investments) has driven a fierce price competition, which in turn has led to lower service differentiation and lower diversity in scope (everyone tries to be the cheapest). Hence, any disruptive technology can be a game changer in the current situation.

Porter's Five Forces are on Amazon's side. They have the upper hand in most of the cases due to their current position. However, there are still factors that one can easily identify thanks to the analysis. For example, even though Amazon's core business relies on electronic commerce, there will always be customers who will go to the classical brick-and-mortar company with hundreds of physical stores spread in different locations. In this sense, Walmart can be one of these tough competitors which have the lead; and to make things worse, they also started doing e-commerce because of the rising e-commerce trend. This means that if, for example, Walmart gets the expertise in the transportation logistics and drives down the costs down such as Amazon, they will not only have many physical stores but also small delivery fees, taking Amazon's core advantage.

Moreover, the low shipping costs have led Amazon to charge small premiums for the products they sell; but this also means that Amazon must be constantly optimizing their delivery process to keep charging low prices. The reason for this is that customer's price sensitivity plays a central role in Amazon's strategy, it is one of the main factors that attract customers and if they were to find other companies offering lower prices with excellent service, this could harm Amazon infinitely. This also involves all the third parties involved in the supply chain until the packages arrive at the customer, because Amazon's dependence on third party carriers is huge, especially when there are only a few carriers that can fulfill 2-day delivery promises and they charge high premiums for it (this is the main driver of the rising shipping cost – shipping revenue spread)

4.3 SWOT

4.3.1 Strengths

1. Amazon is currently the market leader in the retail e-commerce industry. Initially focusing on cost leadership, their history and success has also let them offer differentiative service at a cheap price that competitors might never reach.
2. Amazon's rapid adoption of new technology has made them able to sustain their advantage and keep improving their services as technology advances
3. They have also invested strategically in emerging economies, establishing their operations in many countries and building relationships with sellers worldwide. In the last years they entered key markets like Brazil and India, and now they will begin operations in Turkey. This will contribute immensely to their long-term growth.
4. The CEO, Jeff Bezos, is somebody who is always driving the company's mission and vision to change the world and has motivated all his employees to help him accomplish his mission. He never stops making unexpected changes that are focused on the long-term growth and the customer experience. He is a valuable asset to the company's growth.
5. Amazon's economies of scale and the fact that they have almost no physical stores, has let them 'operate on razor-thin margins and still make money on the transaction. Physical retailers can't do that and if they drop prices online they risk cannibalizing their own sales and driving margin down while having all the same overhead costs"
6. The last mile delivery is partly outsourced to external companies that have a much efficient service than their own, with which they make mutual benefit

deals and contracts. This way, they reduce costs, optimize delivery and cover a wider distribution network

4.3.2 Weaknesses

1. To enforce their cost strategy, Amazon operates on extremely low margins due to their free shipping and customer experience approach, meaning that even when the company's revenue is growing at an outstanding pace, their net profitability does not grow much (see figure 10). The problem comes if they were to face a recession, where revenues would be highly diminished. Would they be able to maintain their cost leadership approach?

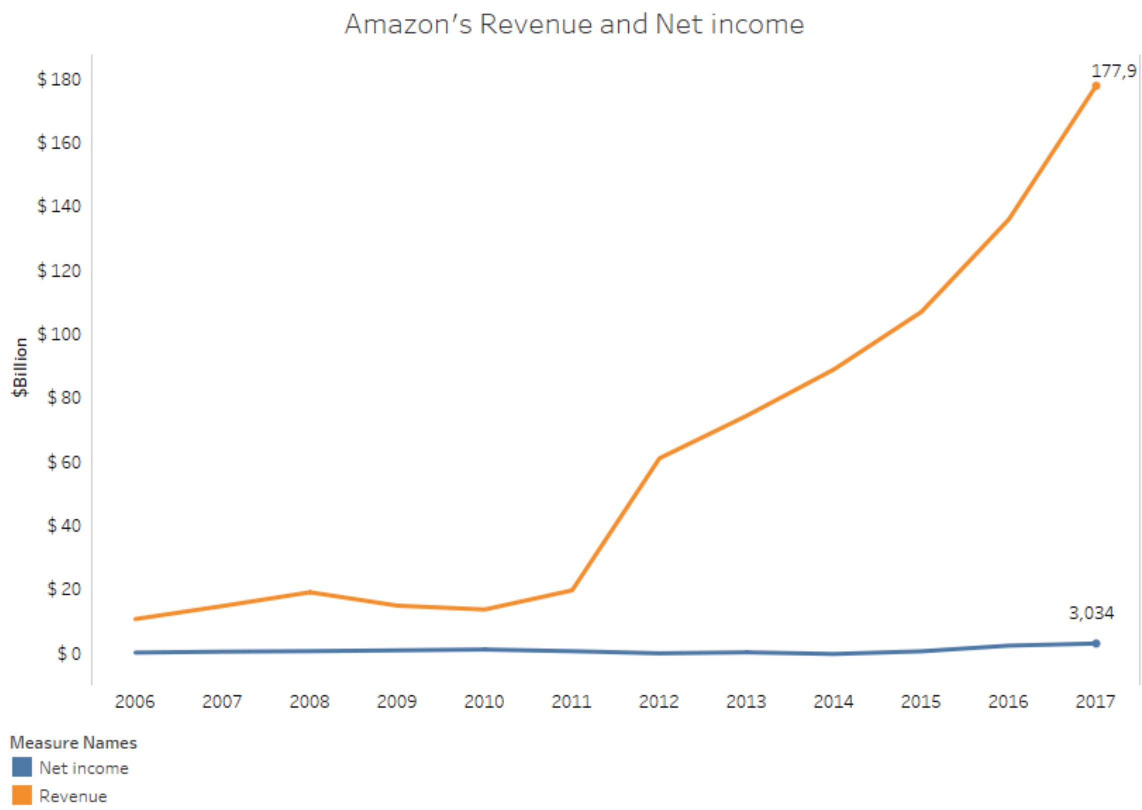


Figure 9 - Amazon's revenue and net income from 2006 until 2017

2. While Amazon's expansion in new products and services brings diversification and has made them have huge successes in some areas, it is also drifting away

from its core competence into markets where they are not as strong as others. These expansions can carry high cost if done without careful plan and analysis.

3. Amazon's revenues are highly dependent on the season. Typically, in the last quarter of the year (Oct – Dec), the company's operations increase significantly which requires more workforce with training, increasing costs meaningfully.
   "We expect a disproportionate amount of our net sales to occur during our fourth quarter. If we do not stock or restock popular products in sufficient amounts such that we fail to meet customer demand, it could significantly affect our revenue and our future growth." (Bezos, 2016)
4. When delivering, Amazon relies too much on 3rd party carriers for keeping its promise with customers. This comes at a high risk since:
   a. Amazon's brand is damaged if the 3rd party carriers don't perform as expected, with a bad service or delivering slower than what the customer asked for.
   b. 3rd party carriers' capacity is limited and may not be able to fulfill all the demand that Amazon can provide.

4.3.3 Opportunities

1. Amazon could grow their distribution network along with its own carrier, Amazon Logistics. This will optimize their delivery, depend less on 3rd party carriers, and reduce costs in the long run.
2. Considering mobiles devices importance to today's technology, Amazon mobile experience does not provide anything different than their web portal. Hence it is an area where improvement can be done to optimize the shopping experience thus generating more revenues.
3. Developing and innovating the ways they deliver to the customers, e.g. using drones for agglomerate areas would, on the long term, do the deliveries faster since the traffic problem would not exist, and it would also reduce the costs of delivery thanks to using no personnel and trucks.
4. Opening new delivery services, such as "on demand" delivery where a client could buy something without having to pick an exact location such as its house

or an Amazon locker, but instead the current position he has. Another service would be the food delivery business, where they have not stepped in.

5. Automated vehicles can help, in the long run, reduce costs in countries where the labor is expensive and the distance to be done is large.
6. Investing in plant capacity and building more fulfilment centers to be able to maintain promise times with easiness.
7. Strategic terms or collusions with 3rd party carriers for long lasting relationships with mutual benefits so both can enjoy higher profits.
8. Vertical or horizontal integrations could help the company advance in many fields where they have small or no presence like they did with Kiva Systems in 2012. They bought them to become Amazon's robotic entity for automating sortation and picking process with robots inside the Amazon's sortation centers.

4.3.4 Threats

1. Amazon's low profitability can make them vulnerable to competitors if they have a disruptive innovation that brings a more cost-efficient operation.
2. Competitors can finish the automated vehicles before them, giving opponents an edge in terms of knowledge and time in that part of the business.
3. They can face lawsuits or strikes from workers because of several conditions that made the work environment not pleasant.
   "Unions said in a statement more than 500 Amazon workers at the Piacenza site in northern Italy had agreed to strike following a failure to negotiate bonuses with the company."
4. Any government regulation can damage heavily the company, specially now that they have grown so much and expanded into many different businesses.
   "We are subject to general business regulations and laws, as well as regulations and laws specifically governing the Internet, e-commerce, electronic devices, and other services. Existing and future laws and regulations may impede our growth" (Bezos, 2016).

5. Third party carriers can make collusions and stop negotiating terms with Amazon to leave them out of the competition, impacting their revenues and putting them in a tough position.
6. The third party expresses carriers that can deliver on the same day promise can charge higher rates because only them are able to much such type of deliveries.

Amazon’s external analysis previously done explained accurately the main drivers that affect the firm’s business, mostly focused on the transportation part. Summarizing, we discovered multiple factors that are out of Amazon’s hand but that can still potentially harm the business: Any government’s regulation to stop their growth, China’s and India’s high barriers to establish prosperous business for international companies, exchange rate fluctuations, global economic downturn, data & client regulations/scandals, and more.

The analysis also exposes the strong points of Amazon from which it leverages, like the current economies of scale they are enjoying, their excellent customer service, the attraction of third party sellers, attraction of customers, their membership services that provide customers excellent experience, the number of customers the company is exposed to (e-commerce advantage), and many more.

Taking this into account, one can start establishing the action points that can hedge Amazon’s risk and at the same time give direction to new strategies.

Chapter 5 Internal Analysis

This section of the thesis will explore and expose the organization's resources and capabilities to find out the firm's internal strengths and weaknesses. Then, one can leverage these data to develop strategic decisions to ensure growth and sustainability.

The main framework to use will be VRIO since it provides valuable information on the company's current competitiveness, imminent threats and cost position.

5.1 Resources and capabilities

Resources are productive assets owned by the firm, and they constitute an input factor for a possible competitive advantage. On the other hand, capabilities describe what a firm is a good at, and they are the essence of superior performance.

Amazon's transportation business resources can be divided into two: tangible and intangible. The former would refer to the people, distribution network, plants, properties, customer service, etc. The latter refers to the resources that the firm has without physical presence, like the brand name, customer loyalty, and reputation.

One cannot argue that Amazon's capabilities in the transportation model would be the free shipping, 2-day delivery, customer service, prime now, selection and seller attraction.

5.1.1 VRIO

Resource/Capability	Valuable	Rarity	Costly to imitate	Exploited by the company	Competitive implication
Plant, Property and Equipment - Capacity	✓	✗	✓	✓	Temporal competitive advantage
Highly capable people	✓	✓	✓	✓	Sustained advantage
Distribution network	✓	✗	✓	✓	Temporal competitive advantage
Customer loyalty	✓	✓	✓	✓	Sustained advantage
Brand name	✓	✓	✓	✓	Sustained advantage
2-day delivery	✓	✗	✓	✓	Temporal competitive advantage
Customer Service	✓	✗	✗	✓	Competitive Parity
Low price	✓	✗	✓	✓	Temporal competitive advantage
Prime Now	✓	✓	✗	✗	Unused competitive advantage
Free shipping	✓	✗	✓	✓	Temporal competitive advantage
Selection and Seller attraction	✓	✓	✓	✓	Sustained advantage
Website interface	✓	✗	✗	✓	Competitive Parity

Table 2 - Amazon's transportation resources and capabilities

Deep diving in the resources Amazon has, many of them have made the company the giant it is today. However, this may not last forever because, following the VRIO model, most of them do not provide a “sustained” value, i.e. permanent.

The first two resources, free shipping and 2-day delivery options provide value to the customer since their experience is enhanced by increasing delivery speed, lowering his total price and because, psychologically, people only like to pay for the price of the product; anything on top of this is extra cost and generates disgust from customers.

The problem for both is that, while years ago it was rare, it is not anymore. Many firms offer free shipping and fast delivery on their products (Target, Dell, Walmart, etc.) and more will continue to do if they have the financial resources that enable it, hence they are only considered a temporal competitive advantage since it will not provide value in the future, as other firms will catch up.

Another challenge for them in the coming years will be their conversion to a basic need. Nowadays, people have started changing their perception about the service, while before they were considered an “attractive/delighters” perk to have when they bought a product (Kano, 1984), now they are regarded as a “one-dimensional” perk i.e. if it is not included, generates disappointment. In the future, due to competition, it will become a basic need in the service (taken for granted).

The next resource, highly capable people, is one of Amazon’s sustainable advantage. The firm was ranked as number #1 by LinkedIn in 2018 as the company where people want to work. The reason for this is that people feel like they are doing new and innovative projects with one of the world's most valuable companies and that they belong to a company that is changing the world. Highly capable people provide value, they are not easy to find, and if companies do, it costs them high amounts of money.

Brand name. Amazon is now recognized as the biggest e-commerce retailer in the world. When somebody wants to buy a product, the first option for many is going on Amazon.com, before eBay or any other e-commerce retailer; because they perceive quality and value from the company. This resource is something that you build with years of the market, recognition, good service, customer approval and constant innovation on behalf of the customer.

Amazon's distribution network represents a temporal competitive advantage because, even though they are massively growing the sortation and fulfillment centers everywhere in the world, the other retail giants are also capable of doing so. Amazon is not the only company that has the cash to make the investments required to be able to fulfill everywhere. The good advantage of Amazon is that they are pioneers in this segment, so when competitors start to build, Amazon has already the business established and is already planning, if not done already, where to build the new warehouses. Summarizing, Amazon's distribution network is massive and can fulfill with almost 100% coverage all the countries where they are established, but it is just a matter of time (maybe longer than sooner) until competitors catch up and are able to provide to the same places Amazon does with the same speed.

Amazon's main principle is "customer obsession". This simple yet deep principle has been the key factor that has led Amazon to where it is now. Yet it may not last forever, why? Competitors will soon realize that the number one element that is driving Amazon's success is their customer experience. When they realize this, they will copy and improve all their processes focusing on starting from the customer and then going backwards. A good customer experience is neither costly to imitate or rare to find; that is the reason why, in the long term, will only be a competitive parity (everyone on the industry will enjoy the same quality of service).

Amazon's low prices are valuable because they enhance the customer experience and can only be done by companies that have enough financial resources to sustain low prices. While it is not rare to decrease the prices of the products, it is costly to do so.

Before being able to decrease costs to the point where Amazon is now, companies must have another source of income or they might go on negative profits that can hugely impact their position. For now, Amazon enjoys the low-price leadership but, in the future, this will stop being an advantage when other retail giants match Amazon’s infrastructure.

Prime Now is a service that offers 2 hours delivery for over 1,000,000 products as the time of writing. This provides tremendous value to customers that need goods in a short time frame and it is not easy to achieve. It is incredibly rare (no one is currently offering this service, except Amazon) and it is extremely costly because you need to have warehouses near city centers and also use express carriers that charge huge amounts of money to deliver in this time-frame. The problem is that Amazon is not exploiting this service yet because they do not have the capabilities and resources, and it is only available in some cities like Paris, Milan, New York, and other big cities. However, the advantage is that they are pioneers on this and can soon transform from an unused advantage to a sustained competitive advantage.

Selection and seller attraction is one of the elements were Amazon excels the most. As the flywheel business model states, one of the main factors that make the flywheel spin faster is the increasing selection. Amazon’s growth and customer attraction has made every vendor interested in selling their products in the company’s website because of the exposure their products can get, potentially increasing the vendor’s revenue in a way not possible if done in other e-commerce websites. Thus, both seller attraction and selection are growing (they are correlated) exponentially, generating value for the customers. This is a sustained competitive advantage because it is rare to attract so many sellers to one website, which gives Amazon an incredible edge against other websites, which is hard to imitate because the only way to do it is through years of excellent service and through brand recognition.

Amazon website interface is clear and simple for the customer, also having the latest resources of cookies usage and coding methods to appeal to their clients with what they feel interested at. It also, though machine learning, offers subsequent options that match the product that the customer is initially looking for, hence the customer fully “covers” his needs and more, for not saying changing the customer mindset to make further purchases of what he though. Amazon does not only provide solutions but alternatives to enhance the customer shopping satisfaction, giving the customer an ultimate experience that ends in customer loyalty.

A good website it not rare nowadays because to find and create such website is not hard, the challenge comes from the volume of potential clients forwarded to the page and their awareness, but the website itself is not rare or even hard to imitate. That is why all the e-commerce companies that enjoy a user-friendly website are in a competitive parity.

From Amazon’s internal analysis, focused mostly on transportation, the main internal challenges and areas of improvement can be spot out, with which strategies can be implemented to face them and grow. The main challenges that came out during the internal analysis can be summarized in the following: small profitability (in terms of net income, almost flat), reliance on third party carriers, brand image exposure (can be harmed if third party’s do not perform as expected), limited capacity in peak season (November, December), disruptive innovations, among others. In the same way, the opportunities that Amazon enjoys are many, among which: the growth of the distribution network, delivery in new ways (drones, automated technology, etc.), more plant capacity, integrate with other businesses to expand further its services, prime now exploitation, less delivery outsourcing, and others.

The analysis done so far helped in the identification of the areas, both internally and externally, were the strategies should be directed to help Amazon maintain their current leadership position and transform some of their current weaknesses or unexploited capabilities in competitive advantages. The next section of this thesis will explore the strategies aimed to solve the core issues recognized.

Chapter 6Strategies

Amazon is a giant company which now enjoys the biggest market share in the e-commerce industry thanks to many factors such as their big networks that are enabling Amazon Prime services and an optimal outbound delivery strategy. Maintaining a competitive advantage is difficult since competitors are rapidly evolving and adapting to new technologies that may disrupt the current paradigm to take some of the customer shares that Amazon has. In this sense, what are the possible strategies that Amazon can do to ensure their actual leadership?

In the previous chapter transportation key points were disclosed, strategically speaking, to maintain and build advantages over the competition. Particularly, the key points identify were Amazon's weaknesses and opportunities are, which will be the basis for the construction of the strategies in the thesis. Each tactic described in this chapter will aim to solve and attack one or more issues recognized above.

6.1 Amazon Logistics

Amazon Logistics (AMZL) is Amazon's own transportation service that began operations to reduce operating costs and dependencies on external providers. It all began when Amazon, to fulfill their two-day delivery promise of Amazon Prime, had to use expensive express services at FedEx and UPS. The prime orders were soaring so much that they realized that the capacity they were offering may not be enough, especially during the peak season, where they experience 30% of the total sales in a year. Because of this reason and the high cost to make this type of deliveries, Amazon decided to be able to have another choice, AMZL. The following citation comes from a job posting in Amazon website:

"Amazon is growing at a faster speed than UPS and FedEx, who are responsible for shipping the majority of our packages. At this rate, Amazon cannot continue to rely solely on the solutions provided through traditional logistics providers. To do so will limit our growth, increase costs and impede innovation in delivery capabilities. Last

Mile is the solution to this. It is a program which is going to revolutionize how shipments are delivered to millions of customers."

At the end of 2015, AMZL white trucks started appearing in the roads. This was the first time that packages were delivered by Amazon, making a huge jump to the future of delivery services.
The correct growth of AMZL is of major importance because of two reasons: it is a key element that can make successful the decrease in shipping cost and will also make competitors rethink their strategy. Even if at the start the costs are high at the beginning, it will start growing in capacity and start delivering more packages, reducing costs due to higher volume (less fixed cost per unit) and because of the learning curve. Also, if Amazon effectively manages to reduce fulfillment, sortation and logistics costs to a point where they are cheaper than the competitors, maybe through technological innovation, it may become a service to be used not only by Amazon but by the other freight companies. Are other companies innovating their delivery services? If they are not, Amazon's entrance into the logistic services can represent a major disruption in the current scenario.

6.1.1 Growth factors AMZL

6.1.1.1 Fast fulfillment

Nowadays, customers have changed the way they behave, and they are increasing the demand for faster delivery. Specifically, there is an increasing trend for same day delivery that is playing an important role in the last mile delivery market.

According to McKinsey, the same-day delivery market will be around €3 billion in 2020, mainly coming from France, Germany, and the UK (see figure 11).

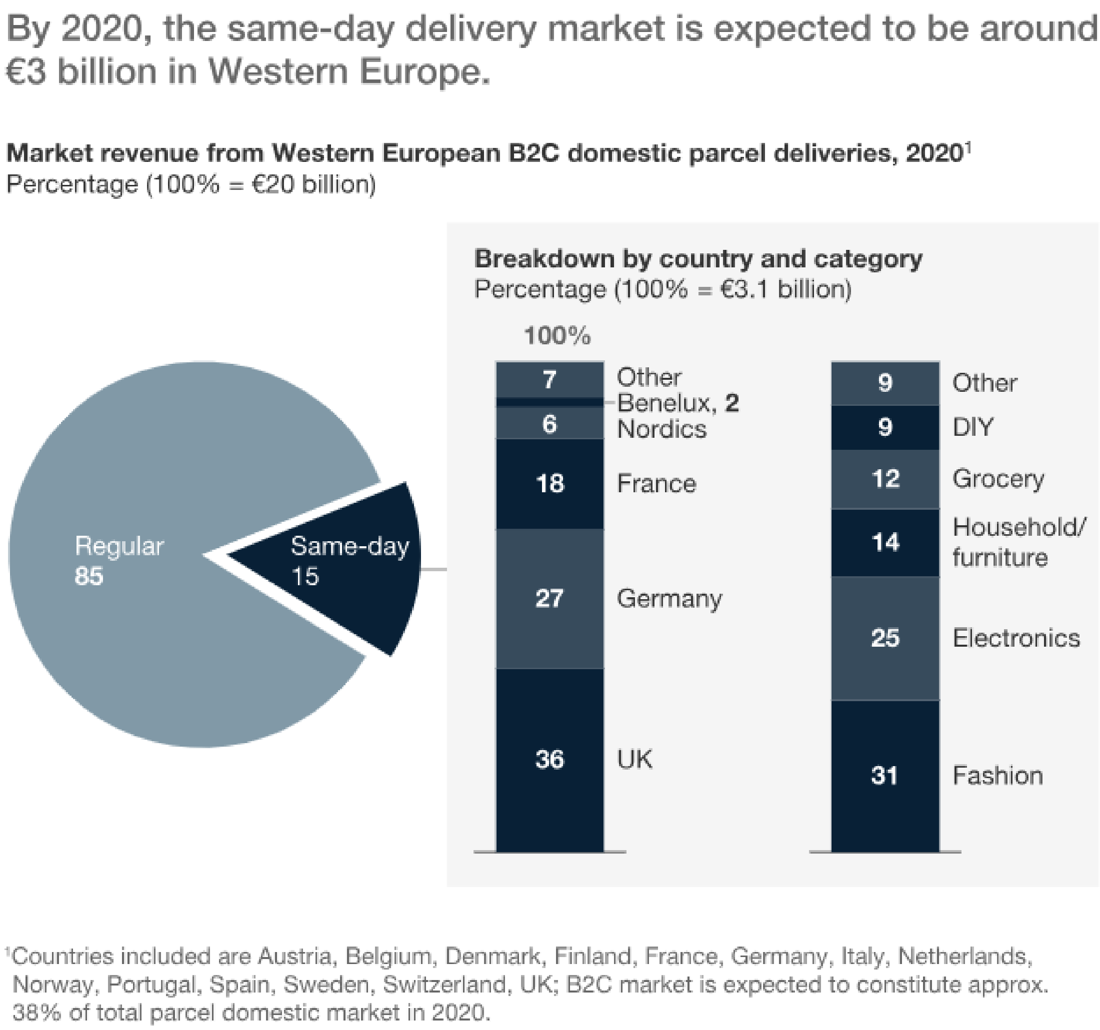


Figure 10 - Same-day delivery market expectations in Europe

The evolution and availability of same-day delivery will take the customer experience to a higher level of satisfaction that will again attract more customers and make the flywheel spin again. The fact that Amazon already has scale advantages and a huge existing network combined with Prime Now where the price is free for Prime users, same-day product availability is an extremely powerful customer value proposition that will create a strong competitive advantage versus competitors.

However, same-day delivery is a complex and challenging service that comes at a high cost. Only a big network with enough volume can benefit from economies of scale, and to achieve large volumes is difficult in the beginning and may require huge upfront investment. Also, it is worth mentioning that only countries with a high share of people living in dense areas are the ones provide advantageous conditions for this type of delivery (such as U.K); since more deliveries can be done per km^2, decreasing the overall cost per shipment, an important metric in transportation finance. The other challenges coming from same day delivery are:

6.1.1.1.1 Product availability

The areas where you can implement fast delivery are only the ones where there is a warehouse located in a distance not that far from the city with the most products available, which makes it easy to distribute. But how do will they know which product to have in each warehouse? Amazon can leverage technology to extract and use customer information. By doing this, Amazon can tailor the customer experience by presenting products based on their past buying behavior or showing customers additional products they might like during the checkout process, and this way they might try to predict the type of demand from customers to do a better product allocation in the warehouses. In other words, a success factor for correct product availability is to optimize the recommendation algorithm and to be able to keep building more fulfillment centers near the conglomerate areas to be able to meet their demand.

Amazon surely knows this, which is the reason why there is an increase year over year of the total space occupied by their warehouses, data centers, sortation centers, and others (see figure 12) with a compounded increase of 23.3% year over year from 2012 to 2016.

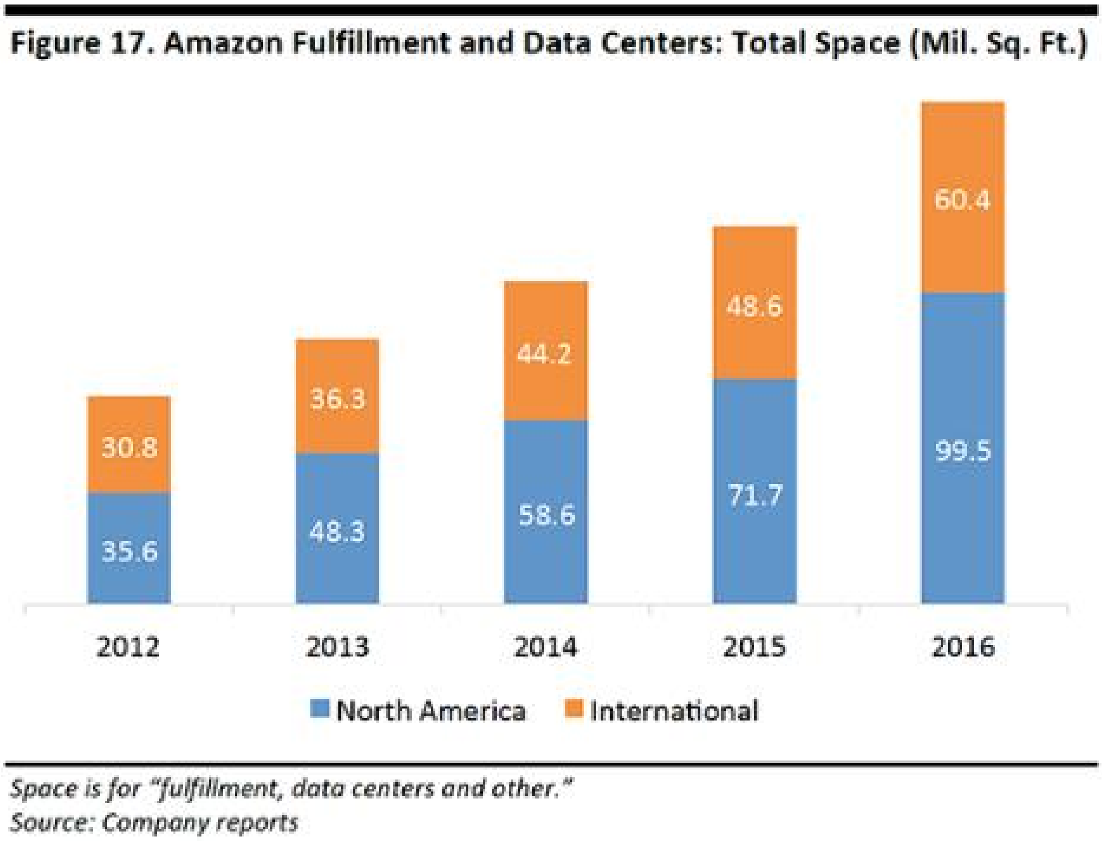


Figure 11 - Amazon warehouse's total space

6.1.1.1.2 Real-time inventory visibility

To be able to provide the service fast, there must be an established tracker of inventory levels to figure out if the product is available or not for same day delivery. They need to be aware of the stock levels in the warehouses and update them regularly to know where to pick up the package with no delay.

If Amazon succeeds in implementing this strategy, on the long term it will be able to create a sustained advantage in terms of delivery versus competition, ensuring same day and 2-day delivery promises without having to pay huge amounts to express carriers, and changing their current temporal advantage of delivery to a sustained one because they reduce the supplier´s bargaining power due to less dependence on them, putting Amazon in the other side of the table when it comes to making negotiation for rates.

The objective of this strategy would be to attack one of the biggest weak points of Amazon: its reliance on third party carriers. The firm is subject to dependence on these carriers, especially during peak times. Being this the case, they can charge premiums for making deliveries increasing Amazon shipping costs immensely. Moreover, Amazon puts itself at risk in terms of customer experience; because if the third-party carriers do not deliver in the promised time to the customer, the one affected is not them, it is Amazon. Hence it hurts brand image and customer experience. Furthermore, in the long run, thanks to economies of scale, Amazon will be able to decrease the shipping costs of AMZL to a point where it will be cheaper than other carriers, allowing them to control and decrease their costs in a more empowered way.

6.2 Postal Injection

For a prime delivery, this service is one of Amazon's greatest way to reduce transportation costs. It consists on injecting directly pre-sorted packages at an Amazon's sortation center to a carrier's local delivery station for the last-mile delivery. The main benefits that come from here are two: speed is greatly improved, and that Amazon handles all the line haul process whereas the commercial carrier only takes care of the last-mile service.

Normally, Amazon's package leaves from the fulfillment center to a carrier's national hub and then they take care of the rest. This means the carrier had to do all the remaining line haul (typically sort packages at national hub, deliver to their regional hub, sort again in there and lastly send the package to their delivery station), charging Amazon premium fees and creating risks for Amazon if they did not comply with the estimated delivery arrival. Since the initial process has many legs, it was often difficult that without the postal injection the 2-day deliveries were made in time, so Amazon often had to use Air connection to be able to comply with the promised delivery time, but this came at a high cost. Injecting directly in the delivery station greatly reduces the total delivery time and costs from two sources: less premium charge since third party carrier is only in charge of the last mile delivery and fewer costs from using fewer air connections (both from Amazon or the express carrier) to inject into third party carriers' hubs.

Amazon overseeing all the line haul means that the carrier only pays for the last mile delivery, for which they offer special rates that benefit both companies. The challenges that come with the postal injection can be summarized in two:

a) Amazon's sortation centers relatively close to carrier's delivery station.
b) Proper demand planning, for correct items in Amazon's warehouses, to be close to the sortation center, hence lower delivery cost.

Postal Injection is heavily reliant on a complete sortation network to work efficiently. In the beginning, when Amazon didn't have sortation centers, it relied on third-carriers for doing the line haul and inject in the last mile delivery stations, but this was not improving the cost as expected. But by using its own sort centers, Amazon significantly reduces costs throughout the network and enables bundling to happen at a greater frequency.

Thus, Amazon first started building sortation centers in 2013. As demand increased, the company has expanded its network considerably but still lacks the infrastructure to purely do Postal Injection, so it still relies on "regional" and "local" injection, which are more expensive and provide more exposure to risks of not making the delivery on time. This leads to a conclusion that the growth of the sortation network is a must-have to enjoy completely the advantages of the Postal Injection.

6.2.1 Sortation network growth with cross-docking enabled

One of the key factors if Amazon wants to go big in Postal Injection is that they keep growing sortation networks across all the countries where they are established. This will ensure the possibility to do more Postal Injection than it currently is doing.

These initiatives have led to significant improvement to shipping costs, both on long haul and final mile delivery despite their significant capital investments required. This can represent a sustainable competitive advantage because it is costly to imitate, and it not only will generate tremendous cost savings but will also take time for competitors to catch up due to large investments, and planning.

This strategy is aimed at attacking four problems: distribution network, profitability, shipping costs and third-party carrier exposure. When successfully done, as explained, the carrier will only take care of the last-mile part with which not only it will charge a lower amount, but it will also reduce the brand image risk Amazon has when a carrier is in charge of doing all steps in the delivery process (sortation and line hauls). Moreover, with this strategy, Amazon can maintain and even improve their low retail prices thanks to lower shipping costs, and hence, higher profitability.

On the network distribution side, one key factor that would optimize the entire system would be more quantity of warehouses capable of doing the sorting of packages, hence enabling more postal injection and more easiness of distribution; so, a package does not have to travel a long distance before it gets sorted and sent to the next station.

6.2.1.1 Cross-docking

Cross-docking is a logistics activity were inventory items whether raw, partial components or finished products from the supplier or manufacturer are distributed directly to the consumers. Users can be next level manufacturers, retailers or the end consumer. In a typical cross dock scenario, the inventory is stored for a little to no time before leaving to the next destination, the process of cross-docking is simple, yet it provides significant cost savings opportunities. For example, two trucks arrive at a warehouse, one carrying clothing and another cell phones needed by retailer XYZ. Rather than shipping large quantities in advance to be stored until needed, the suppliers of these products ship only the quantity ordered to a single cross-dock enabled facility shortly before the required date. When the trucks arrive, the inventory is unloaded on the receiving dock location to be sorted and staged for shipment. After this, a truck is loaded with the order specifications and ships.

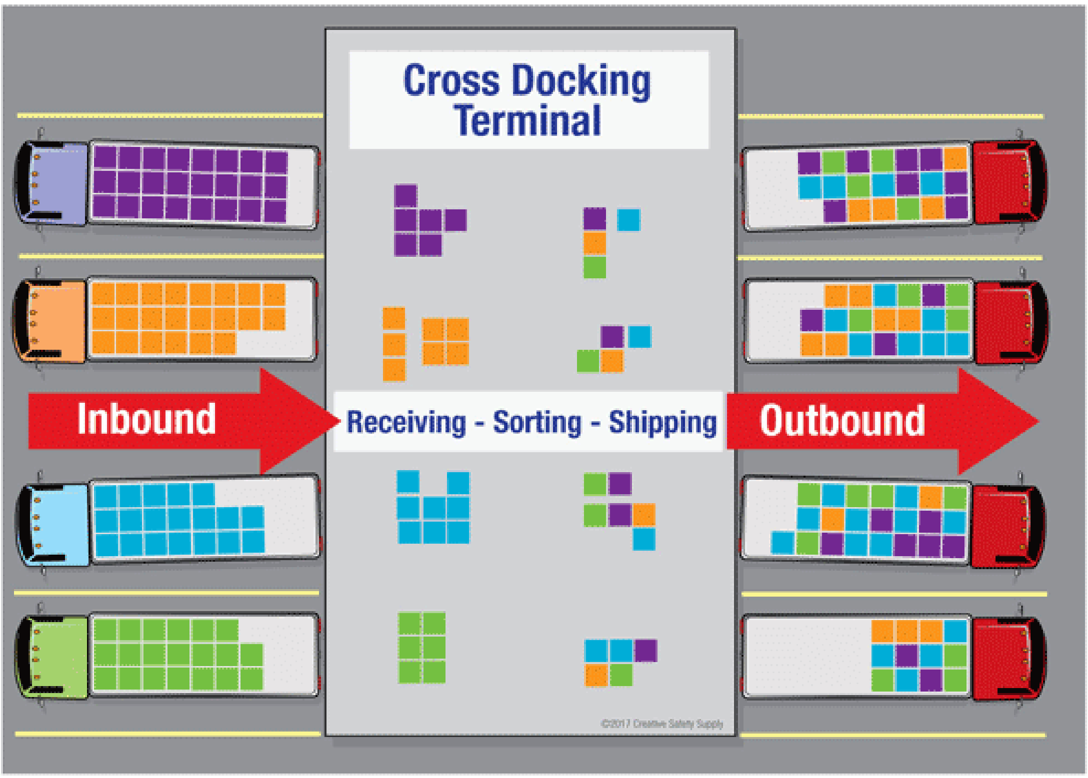


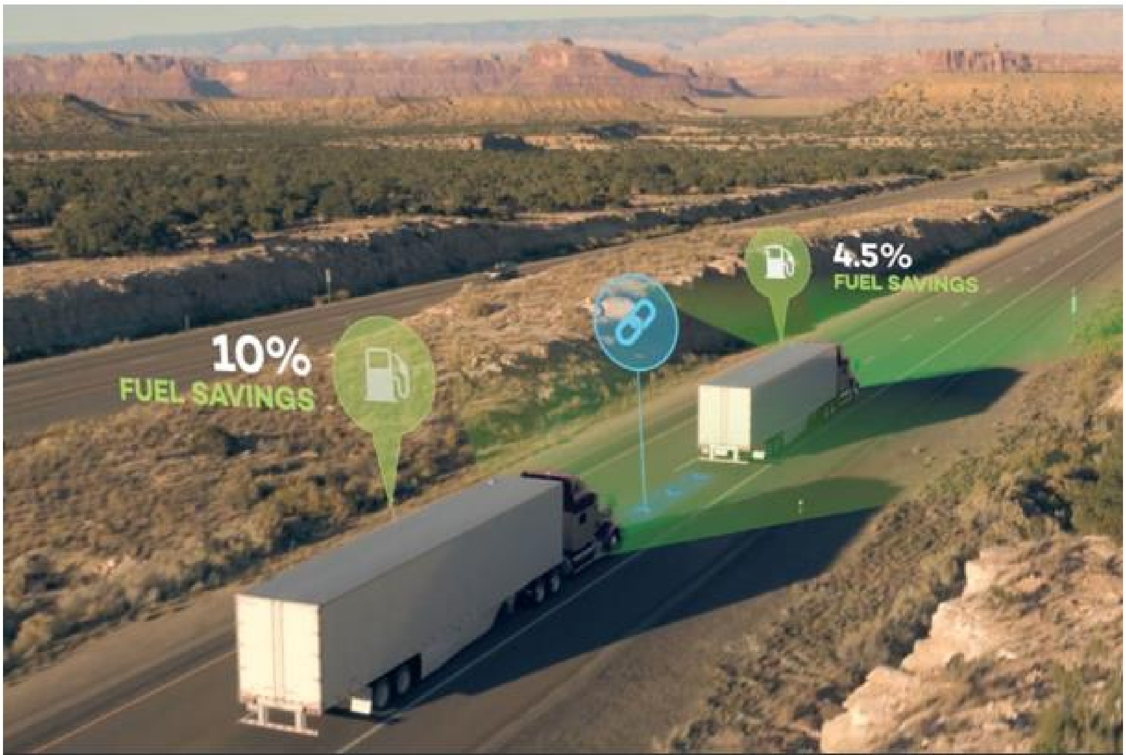
Figure 12 – Cross docking process

Compared to warehousing, there is huge saving from the fact that storing inventory takes space in a warehouse, hence cost. Also, the risk of a product being damaged are much lower with cross-docking because the touches per human involved are fewer than in the traditional method. Similarly, less human touches mean fewer labor costs. Finally, there is also an increase in the total delivery speed of the package.

The main idea of this cross-dock enabled facility in the sortation centers would be to serve as a complement to the actual status, which would help to optimize the operations when the current constraints enable cross-docking. There will always be situations when traditional warehousing and sorting steps cannot be replaced, such as building up inventory for peak periods, large manufacturing batches, and others.

6.3 Self-driving trucks and automation technologies

Self-driving trucks is a technology that is expected to increase truck capacity and efficiency. Platooning, or the linking of two or more trucks, using connectivity technology and automated driving support systems, in a line on the road to improve fuel efficiency, tractor productivity, reduce driver needs, and improve highway safety. Peloton Technology, a company developing platooning systems, says that the fuel efficiency can be up to 10% in the trucks following the first truck, which is also enhanced with a reduction of 4.5% of the normal fuel consumption (see exhibit f33)



Platooning trucks demonstrate potential fuel savings. (Photo: Peloton Tech)

Figure 13 - Platooning fuel savings

Furthermore, self-driving trucks are likely to be operation sooner than self-driving cars from a regulatory standpoint. Several companies are making fast progress already in this area. In February 2015, Embark, a developer of self-driving trucks, completed a 2400-mile (approx. 3840 km) journey in the USA, from Los Angeles to Jacksonville. This proves that sooner than later this technology will grow which can be translated in a cost-savings opportunity.

Using self-driving trucks could be significant. Today's line haul truckers are restricted from driving more than 11 hours per day in the USA and 9 hours in Europe, this restriction would not exist with self-driving trucks. Moreover, according to study made by Deutsche Bank in 2016, it could reduce the portion of AMZN's delivery cost from warehouse to sort center/carrier's hub by as much as 35-60%, purely from salary, wage, and benefit reduction. This is estimated using the current levels of Postal Injection, which is also likely to increase further driving more efficiencies.

Finally, beyond self-driving truck, we see new technologies like Hyperloop potentially further reducing the unit cost and improving the speed of delivery, but these are still limited in scope compared to trucking.

This strategy has the intention to attack the possible new entrants that come eager with new technologies to steal market share from the incumbents. Amazon, being really technology friendly, can hedge the risk that is coming from disruptive technologies such as this one and, instead of being a laggard, they can also be one of the early adopters. This strategy not only embraces the revolutionary changes in technology that are happening today, but it also frightens the newcomers because they do not have the resources or capabilities that Amazon can develop if they were to adopt this technology in the early stages.

Furthermore, this strategy also optimizes more the promise time because the trucks do not have a restriction on the time being on the road, as opposed to drivers who have limitations due to safety and law. Lastly, as stated in the paragraphs above, it also represents cost savings opportunities coming from the fuel and the personnel expenses incurred in the actual situation. Thus, it also decreases shipping costs and increases profitability.

6.4 Prime Now expansion

Prime Now, a relatively new service, offers free 2-hour delivery to Amazon Prime members on a certain number of products. This service represents something that was never imagined before, and Amazon was the first to capitalize on it. While this is a great service, its actual coverage is hugely limited, especially in Europe. For example, in France, the service is restricted to only Paris; in Italy, to Milan; in Germany, to Berlin and Munich.

Furthermore, other challenges associated with this service are related to the high cost that comes from paying carriers and the difficulty of doing it. Making these deliveries in 2-hour windows means going from point A to point B where there might traffic jams, bad weather, and many events that can make the delivery promise difficult to achieve. That is why the service is mostly limited to agglomerate areas, like Paris and Milan, where making deliveries is easily achievable since the distance between people is relatively small compared to most rural areas.

That being said, there are cities that can be still categorized as agglomerates and they yet lack the Prime Now service, and these can be strong places to materialize the service. For example, cities that can fall into this category (setting as threshold berlin's population density of 4717/km^2) would be:

- France

    1. Lyon: population density 10460/km^2
    2. Bordeaux: population density 5081/km^2
    3. Montpellier: pop. density 4840/km^2
    4. Nice: pop. Density 4782/km^2

- Italy

    1. Naples: population density 8183/km^2
    2. Turin: population density 6786/km^2

- Spain

    1. Bilbao: population density 8688/km^2
    2. A Coruña: population density 6510/km^2
    3. Seville: population density 5022/km^2

These cities can represent an attractive market for Prime Now expansion, which can be made possible if amazon warehouses are nearby and can make the service possible.

In addition to this, another blocker in the service is the number of available products, which is highly dependent on the warehouses nearby. One way to attack this problem would be through establishing strategic partnerships with brick-and-mortar chains that act both as a warehouse and a supplier of products. One example of this can be what Amazon did in the USA when they strategically acquired Whole Foods to be able to deliver more products and to do it quickly. For Prime Now, this was a huge move since having so many physical locations allowed the company to expand the service into more than 20 cities and with thousands of products more, especially in the organic food segment. In Europe, Amazon can try to find partnerships in a similar way with big supermarkets that have a strong presence in almost every city and then look where the Prime Now service would be profitable and doable.

This strategy seeks to turn, as exposed by the VRIO methodology, one of Amazon's unexploited services into a possible sustainable competitive advantage. If Amazon can expand its Prime Now service across all other high dense and high consumer areas, the positive impact that they will get would be tremendous. Consumers already expect fast delivery, and this will further shrink the amount of time in which consumers expect their products to be delivered.

The downside from this strategy is the increasing cost spent to handle the Prime Now deliveries. However, this increasing cost is expected to be more than offset by the other strategies mentioned in this thesis, because the synergy that they have between them is much more impressive than each strategy itself. It is also important to mention that, even if the cost of Prime Now proves challenges to get reduced, there would always be a side benefit of Prime Now, which is an increased attraction to the prime membership. People who before were not Prime members will have a new big reason to buy the membership. Especially true for fathers or mothers who stay at the house taking care of the children, because with the enhanced service they will be able to the groceries without leaving the house and their children. Finally, this will increase even further profitability driven by higher revenues.

6.5 Drone delivery

Amazon is currently experimenting and testing how the drone delivery model would work. They do this because, even if it is not a must-have now, it will for sure become one in the proximate future. According to business insider intelligence (BI intelligence), the mass adoption will occur after 2020. The reason because it is not happening now is due to regulatory barriers, technical issues, and customer acceptance. For example, In the USA, there is a regulation which requires that pilots be able to see their drones when flying them. This makes it impossible to test long distance deliveries with the drone. This kind of regulations is expected to change drastically in the coming years when technology proves itself worthy of use including all safety matters.

The benefits of Amazon's adoption of this technology would be tremendous. For instance, it is estimated that the cost could decrease to less than $1 per shipment, compared to the actual estimated $5.75; with this, Amazon could lower its retail prices even further. Moreover, consumers would receive their packages rapidly and reliably, which would enhance the consumer and brand loyalty. Most probably it will start with rural and not dense areas where landing spaces will be wider and easier to control.

This strategy would be aimed to increase Amazon's profitability by decreasing the shipping cost of goods sold. Also, it would completely generate a new way of making deliveries in the online retail sector which might become a big disruptive technology, with Amazon being the pioneers and innovators in this sense. Also, delivery times would be further improved, making Prime Now deliveries even more feasible because traffic jams or crowded areas would not be a problem anymore. In fact, in the promotional video Amazon launched in 2013, when they started testing drone deliveries, they stated that the shipments would be made in 30 minutes. If this is accomplished, the customer loyalty, service, and their brand perception would be completely dazzled.

Not only it would benefit and profitability, brand loyalty, delivery times, but it will also match completely and consistently with the other services they have. Particularly, combining Prime Now, Amazon Fresh and a drone delivery service would be something that could change entirely the way people do the groceries nowadays; because the total outcome will be cheaper, faster, fresher, and most importantly, from a click away in any household's comfort.

Figure 14 - Amazon Prime Air

6.6 Partnerships, Mergers, and Acquisitions (M&A)

The direction this kind of strategy should take has been previously discussed in one way or another. Replicating what Amazon has already done in the USA, the firm should also seek to do the same in the rest of the world. The call out is referring to the Whole Foods acquisition, which is an American supermarket chain that specializes in selling organic products. Whole Foods' store network gave Amazon hundreds of locations to execute grocery delivery. Those locations are also very close to Amazon' customers, enabling same-day and time-window (within one or two hours) deliveries. This will create more pressure for competing retailers to develop similar systems to avoid being left behind as same-day delivery becomes table stakes.

If Amazon reproduces this strategy with the mayor groceries chain markets in the rest of the world, many of their actual services will be enhanced. For example, in Europe, Amazon could try to explore what a partnership or even M&As with hypermarkets such as Carrefour, Auchan, Mercadona, and Delhaize. This will not only bring a bigger distribution network, but it will also be in perfect consistency with the other Amazon services. As explained before, Amazon's aim is to turn everybody into a Prime customer, and a way to this is enhancing all the services that they have so clients have no other option than to become a Prime member. In the case of this kind of alliances, the main benefit would come from the fast delivery of the fresh food, services like Amazon Fresh and Prime Now would get a huge ramp up in terms of efficiency, selection, and availability. Clients would be able to do groceries from the comfort of their house with a service which quality guaranteed.

This strategy would be aimed to exploit Prime Now, Amazon Fresh, optimize network delivery and also to build switching costs for the clients that want to do their groceries from another website, or even that want to do them in a physical store.

Chapter 7Conclusions

Amazon has managed to surpass all expectations in any business matter: they have incremented their exposure, clients, sales and expanded their services to a whole new level. In other words, Amazon has managed to create resources and capabilities that have led them to have many competitive advantages over similar institutions. This means that it is also a perfect time for Amazon to invest in itself to develop and build strategies against the infinite possible risks that the future might bring for the company.

Yes, Amazon has gone beyond expectations in the past years, but on the opposite side there's high pressure on them to do better and since they have expanded into many sectors, the options/paths to achieve have become harder to find. As said before, one way to improve continuously is not always inventing new things but strengthen the weaknesses of the company. That is the reason behind almost all the strategies exposed on this Thesis, because there are many areas of improvement inside the current services, especially when they are part of Amazon's core competences.

Due to the thesis limited scope, the following strategies are aimed to solve one or more of Amazon's current issues in the transportation segment of the supply chain. The issues to be solved are the ones which were previously identified as main points of attack. On table 3 a summary of all the strategies generated and their objectives can be seen.

The end-goal of all Amazon's decisions is plain and simple: make the Flywheel spin faster. They try to feed any of the areas of their business model, which has worked perfectly across the years. The strategies suggested in this thesis have the common goal to work in synergy for ultimately upgrading Amazon's Flywheel speed, which is the way Amazon has operated since they started.

In this case, strategies such as Prime Now expansion, Drone Delivery, Partnerships and M&A have the goal the work together to achieve maximum performance: The Partnership or M&A would product mainly two benefits: bigger the distribution network which allows delivery from more places and greater selection. Then, Prime Now customers would be able to enjoy all new and fresh products from the partners, with a less than 2-hour delivery made possible almost completely by the Drone Delivery on all the cases, if not below 30 minutes.

Ultimately, this would increase Amazon's client because of the differentiated service and a greater selection, which in turn would attract more third-party sellers that want to seize this opportunity with more clients. Hence, the Flywheel spins faster.

The other strategies are also aimed to work at sync: Amazon Logistics, Postal Injection, Cross-docking and Self-driving trucks. Each one separated plays its own role: one is in charge of reducing exposure, other in charge of reducing the last mile costs, the next one is in charge of reducing the sorting costs of the package, and lastly the self-driving truck technology would be in charge of reducing all the line haul costs incurred in the delivery from the starting point until the client.

Together they are part of reducing costs at each step of the value chain will ultimately produce value in each segment. Similarly, benefits such as mitigated risk due to third party carrier reliance, less total travel time, less warehousing, the anticipation of future market trends, and many more are also incurred.

In conclusion, even though Amazon is a giant which is trying to take over all business segments, it has many flaws. The important part is being able to recognize them and establish the adequate strategies that can prevent any possible damage that the firm may incur. As of now, the competition is very high, and Amazon has to be aware to every company is trying to catch up, investing billions of dollars to upgrade and optimize their logistic networks to make it faster and more efficient. It is up to Amazon to be able to spot the upcoming threats and act based on this, such as the strategies designed on this Thesis.

Strategies	Main objective	Secondary objective(s)
Amazon Logistics growth	Reduce third-party carrier reliance	Reduced capacity risks in peak periods Lower cost of good solds due to economies of scale More control over the brand image and the customer experience Anticipating future same-day market growth with a proper designed scalable structure
Postal Injection	Decrease shipping costs	Grow distribution network Increase profitability Improve shipping efficiency
Cross-docking	Decrease sortation costs	Decrease risk of damaged items Less travel time Less time for inventory in the warehouses
Self-driving trucks and automation technologies	Adapt early to incoming technology	Decrease fuel and personnel costs (less required drivers) Release the restrictions on trucks time being on the road
Prime Now expansion	Exploit Amazon's actual Prime Now service	Stay on top of the 2-hour delivery Increase Prime Share
Drone delivery	Increase delivery speed	Pioneer a disruptive technology in the market Decrease shipping costs Complement all other services
Partnerships, Mergers, and Acquisitions (M&A)	Grow the distribution network	Align with services like Amazon Fresh, Prime Now, among others Increase Prime Share Build switching costs for clients Increase selection

Table 3 - Amazon Strategies

References

References from websites

Staff, I. (2018, June 08). SWOT Analysis. Retrieved from https://www.investopedia.com/terms/s/swot.asp

Jurevicius, O. (2013, October 21). Is the VRIO Framework a Key to Competitive Advantage? Retrieved from https://www.strategicmanagementinsight.com/tools/vrio.html

Bishop, T. (2013, September 18). Jeff Bezos explains why Amazon doesn't really care about its competitors. Retrieved from https://www.geekwire.com/2013/interview-jeff-bezos-explains-amazon-focus-competitors/

U.S. Amazon Prime subscribers 2018 | Statistic. (n.d.). Retrieved from https://www.statista.com/statistics/546894/number-of-amazon-prime-paying-members/

G. S. (2017, October 19). Report: Prime members now represent 63 percent of Amazon's US customers. Retrieved from https://marketingland.com/report-prime-members-now-represent-63-percent-amazons-us-customers-226573

Columbus, L. (2018, March 04). 10 Charts That Will Change Your Perspective of Amazon Prime's Growth. Retrieved from https://www.forbes.com/sites/louiscolumbus/2018/03/04/10-charts-that-will-change-your-perspective-of-amazon-primes-growth/#125223283fee

D'Onfro, J. (2016, June 01). Jeff Bezos: Amazon Echo is just the 'beginning of a golden era'. Retrieved from http://uk.businessinsider.com/jeff-bezos-code-conference-2016-5?r=US&IR=T

Kim, E. (2016, June 15). Amazon's $775 million deal for robotics company Kiva is starting to look really smart. Retrieved from http://uk.businessinsider.com/kiva-robots-save-money-for-amazon-2016-6?r=US&IR=T

Amazon Sustainability Question Bank. (n.d.). Retrieved from https://www.amazon.com/sustainabilityquestionbank#?category=all&question=f93fc548-13da-3cc7-6336-a7f548477a0b

Kline, D. B. (2015, May 18). Amazon's Sustainable Competitive Advantage. Retrieved from https://www.fool.com/investing/general/2015/05/18/amazons-sustainable-competitive-advantage.aspx

V. Z. (2017, November 23). Workers at Amazon's main Italian hub, German warehouses strike on... Retrieved from https://www.reuters.com/article/us-amazon-italy-strike/workers-at-amazons-main-italian-hub-german-warehouses-strike-on-black-friday-idUSKBN1DN1DS

Hausmann, L., Herrmann, N., Krause, J., & Netzer, T. (n.d.). Same-day delivery: The next evolutionary step in parcel logistics. Retrieved from https://www.mckinsey.com/industries/travel-transport-and-logistics/our-insights/same-day-delivery-the-next-evolutionary-step-in-parcel-logistics#0

Understanding Cross Docking. (2017, May 10). Retrieved from https://www.creativesafetysupply.com/articles/understanding-cross-docking/

Etherington, D. (2018, February 06). Embark's self-driving truck completes 2,400 mile cross-U.S. trip. Retrieved from https://techcrunch.com/2018/02/06/embarks-self-driving-truck-drove-2400-miles-across-the-u-s

Meola, A. (2017, July 18). Shop online and get your items delivery by a drone delivery service: The future Amazon and Domino's have envisioned for us. Retrieved from http://uk.businessinsider.com/delivery-drones-market-service-2017-7?r=US&IR=T

References from public documentation

Cantamessa M. & Montagna F. (2016), Management of Innovation and Product Development: Integrating Business and Technological Perspectives. Springer-Verlag London Ltd

Kano N (1984) Attractive quality and must be quality. Hinshitsu (Quality) 14(2):147–156

Barney, J. B. (1995). Looking Inside for Competitive Advantage. Academy of Management Executive, Vol. 9, Issue 4, pp. 49-61

Federal Highway Administration. (2017). Vehicle and Infrastructure Communications. Retrieved from https://www.fhwa.dot.gov/Planning/freight_planning/talking_freight/march_2017/talkingfreight3_22_2017sb.pdf

European Parliament. (2016). REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R0679&from=EN

Amazon.com. (2018). 2017 annual report. Retrieved from https://ir.aboutamazon.com/annual-reports

Amazon.com. (2017). 2016 annual report. Retrieved from https://ir.aboutamazon.com/annual-reports

Amazon.com. (2016). 2015 annual report. Retrieved from https://ir.aboutamazon.com/annual-reports

Amazon.com. (1998). 1997 Letter to shareholders. Retrieved from https://ir.aboutamazon.com/annual-reports