

**INTERNATIONAL JOURNAL OF LAW
MANAGEMENT & HUMANITIES**

[ISSN 2581-5369]

Volume 5 | Issue 4

2022

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Amazon's Growth in the Context of the Opportunities and Challenges of Industry 4.0

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ABSTRACT

Amazon has grown tremendously over the last decade, becoming one of the most successful and powerful companies in technology and beyond. Its success can be attributed primarily to its management board, which made wise investments in technologies, allowing Amazon to create one of the most integrated supply chains in the commerce industry and beyond. However, maintaining its growth is extremely difficult, especially in such a volatile and competitive market. According to this, industry 4.0 has a high potential as a technology that could help Amazon strengthen its supply chain and maintain its position as the leader in many industries, primarily e-commerce and cloud services.

Among the initiatives that Amazon must undertake is to strengthen all of its information systems against cyber-attacks and to maintain its position as one of the leading companies investing in new technologies such as the cloud via its subsidiary AWS, especially since all projects launched or expected to be launched by Amazon will benefit directly or indirectly from the cloud, particularly Prime Video, Amazon's video-streaming service that will serve as the underlying technology for all of its services. Furthermore, increasing the gap between the company and all other companies in cutting-edge technologies such as robots and autonomous vehicles would allow the company to create a blue ocean far away from the traditional competition. Finally, some industry 4.0 technologies could help the company enhance its distinct and excellent customer service paradigm.

Despite all the changes that Amazon need to adopt to implement the technologies of industry 4.0, some strategic decisions need to be taken in term of the organisational capability by the fact that the decision must be taken by the whole committee and not just one person to avoid repeating the failure of pets.com. Additionally, the company must change its missions, which are primarily focused on one sector, e-commerce, although it is now very successful in many sectors.

Keywords: *industry 4.0, Amazon, supply chain, technologies*

I. INTRODUCTION

It is no secret that Amazon is one of the largest companies in the world. Today, Amazon is no

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longer limited to e-commerce but has expanded its business to cloud computing with the famous AWS and the creation of content with Amazon Prime Video.

After the changes that the world has experienced in recent years and especially after the coronavirus pandemic that pushed the industrial world to accelerate its transformation towards the new industrial era, which is called Industry 4.0. Companies around the world are rushing to take advantage of the benefits this industry offers.

This report will concentrate on the opportunities presented by Industry 4.0 for Amazon's growth, particularly in its supply chain, over the next five years, while also highlighting the threats to which the company should pay attention. To that end, we will cover the following topics throughout this report:

- 1) Macro-environmental analysis
- 2) Industry and competitor analysis
- 3) Vision and mission
- 4) Blue ocean strategy tools and approaches
- 5) Customer experience
- 6) Dynamic organisational capability

II. MACRO-ENVIRONMENTAL ANALYSIS

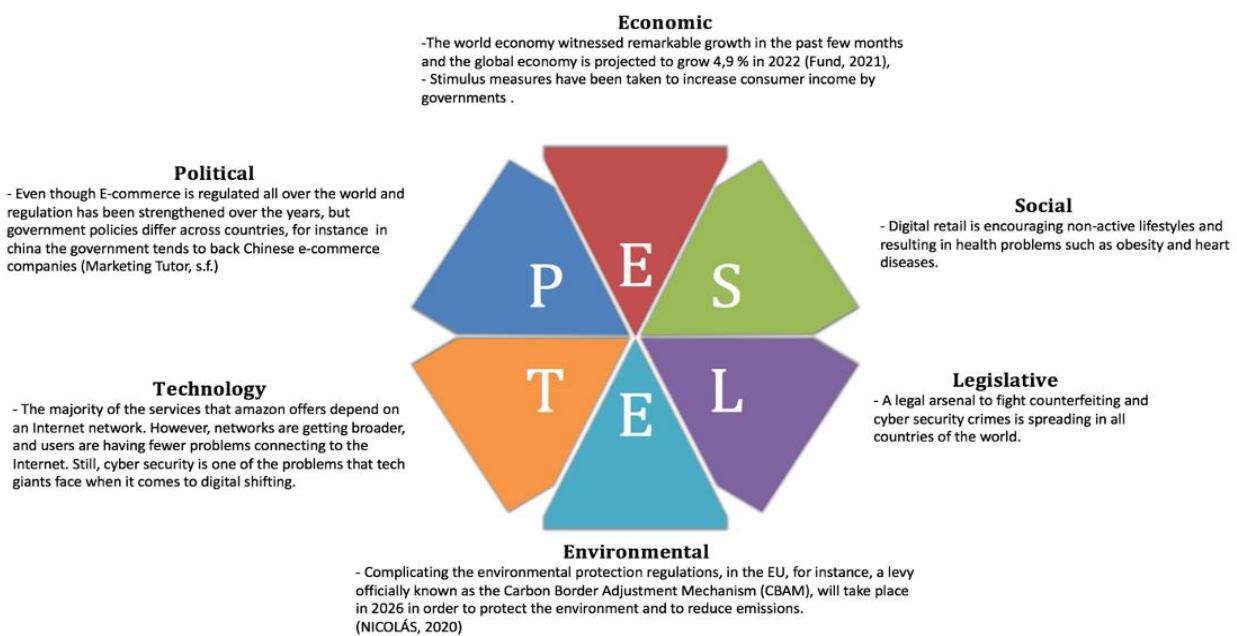


Figure 1: Macro-environmental analysis

As you can see from the PESTEL analysis, many factors directly or indirectly impact the company from the projected growth that the world expects from an economic side. However, the factor that many won't give importance to is the technology through the cyber security issues that the world of today is facing, so it's recommended that the company enhance its information system's security before going any further in the industry 4.0 process. That is to say, automate and digitize the entire supply chain. So that such drawbacks as the problem of data leak which occurred in 2018 in one of its subsidiaries and recently with the game stream platform Twitch owned by Amazon, doesn't happen again. Because the results will be terrible if they occur again. (Martin, 2021)

III. INDUSTRY AND COMPETITOR ANALYSIS



Figure 1 :Porter's five forces model

According to Porter's five forces framework, Amazon faces aggressive competition from various companies in various markets. Despite the fact that it controls a large portion of the market. For example, Amazon had 41 percent of all shares in the retail e-commerce market , but it is still competing against giant retail companies on the one hand. On the other hand, brands that also offer online sales in the e-commerce field. (SureshKotha, 2000)

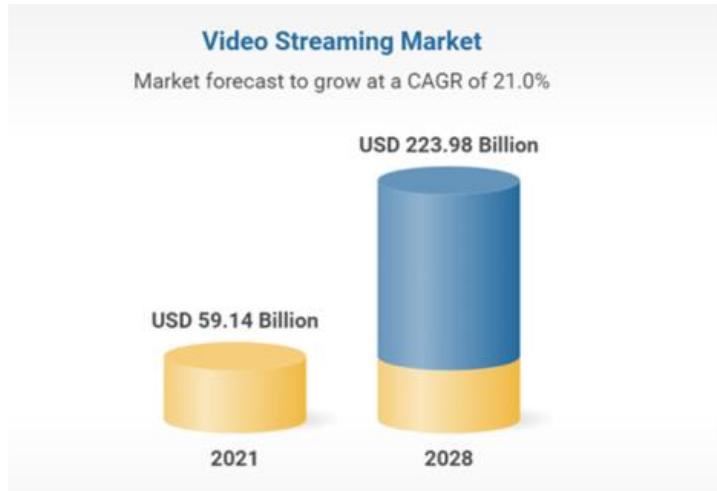


Figure 2:Growth of Video stream Market
(Market research, 2022)

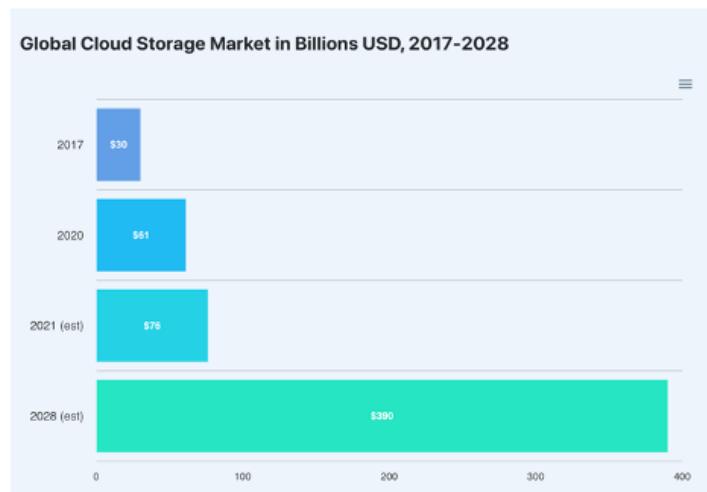


Figure 4:Growth of Cloud Market

The figure shows that the cloud market value will increase by 314 % in the next seven years in the same period, the global video streaming market size is expected to reach USD 223.98 billion, 277% of growth. These colossal numbers show the enormous potential of the market.

Investing among the first companies in these new industries will allow Amazon to become the market leader over time and control most of the market. To do so, the company must prioritise and leverage the high potential of the fourth revolution by investing heavily in new technologies such as AI, VR, and autonomous vehicles to strengthen its supply chain and prepare for market growth.

However, in cloud computing, the company should benefit from its position as the market leader and leverage the market's massive growth in the next five years. In addition to that, the company should benefit from its technology in cloud computing and transfer this expertise to other

company subsidiaries, such as the retail field and its streaming platform, in which the cloud represents most of its costs.

For example, Netflix, a competitor of Amazon Prime Video, paid \$9.6 million per month in 2019, which is a significant fixed cost that Amazon will undoubtedly save by leveraging its cloud solution, AWS. (Cockcro, 2010)

IV. VISION AND MISSION



Figure 3:The strategy pyramid

The vision of Amazon is to be the most customer-centric company globally. And in the same perspective, the company puts a number of missions that goes along with its vision. The company proposes to offer its customers the best services in terms of price and variety of products.

But when it comes to its strategy. It's recommended that Amazon revue its overall missions because it is no longer running in just the e-commerce field. They operate in cloud computing, streaming music, video. Thereby the previous missions are no longer feasible and easy to adopt in these new fields. For the simple reason that each sector has its own specification. For example, Amazon can't go with low prices compared to its competitors in the streaming sector.

Subscriptions to Amazon Prime Video are \$9/month, and it's the same amount for Netflix, even if Netflix is the big player with more content. (Bennett & Stan Lanning, s.f.)

Thus this example reveals that adapting amazon's strategy to all its subsidiaries is not rational.

So it is wise that Amazon keeps the same vision since the company has made great strides towards achieving it. In addition to that, it's easier grouping other activities of the company under this same vision for the simple reason its matches all of them. On the contrary, it will help the company to achieve its long-term vision.

V. BLUE OCEAN STRATEGY TOOLS AND APPROACHES

It is well known that the three pillars of the amazon retail business model are warehousing, transportation and customer experience. In that sense, to create and capture new demands and overcome competition, the company has to push these pillars to another level. And this is a feasible approach, especially with the emergence of new technologies of industry 4.0.

It's recommended that amazon focuses on the tools of industry 4.0 and invest more in these technologies to impact its supply chain significantly. For instance, the acquisition of the Kivas robot considerably affected the time it takes to pick the product from the stacks, pack it, and ship it. This technology has reduced this time process to 15 minutes instead of 67,5 min. (Bogue, 2016) In the same approach, the company can use augmented reality to help operators to accelerate shipping.

Regarding transportation, it's time to shift to autonomous vehicles. And benefit from the experience the company gathered with its autonomous vehicle Zoox. (Zheng & Paul Mueller, 2021)

and the usage of drones in some of the delivery processes, which will be more efficient and environmentally friendly. A highly developed IT system, TMS (Transport Management System), will manage all these transport processes, directly involving excellent energy optimisation and better use of resources with lower operating costs.

An increase in collaboration between AWS (cloud solution) and the other group subsidiaries will be very beneficial in the medium and long term, especially regarding the advanced software that the AWS department develops. With this approach, it is evident that the company will create its blue ocean, and the competitive companies will struggle to catch up.

With this change, it is clear that the company will create its own blue ocean, and competitors will struggle to catch up. (Mathew, 2014)

VI. CUSTOMER EXPERIENCE

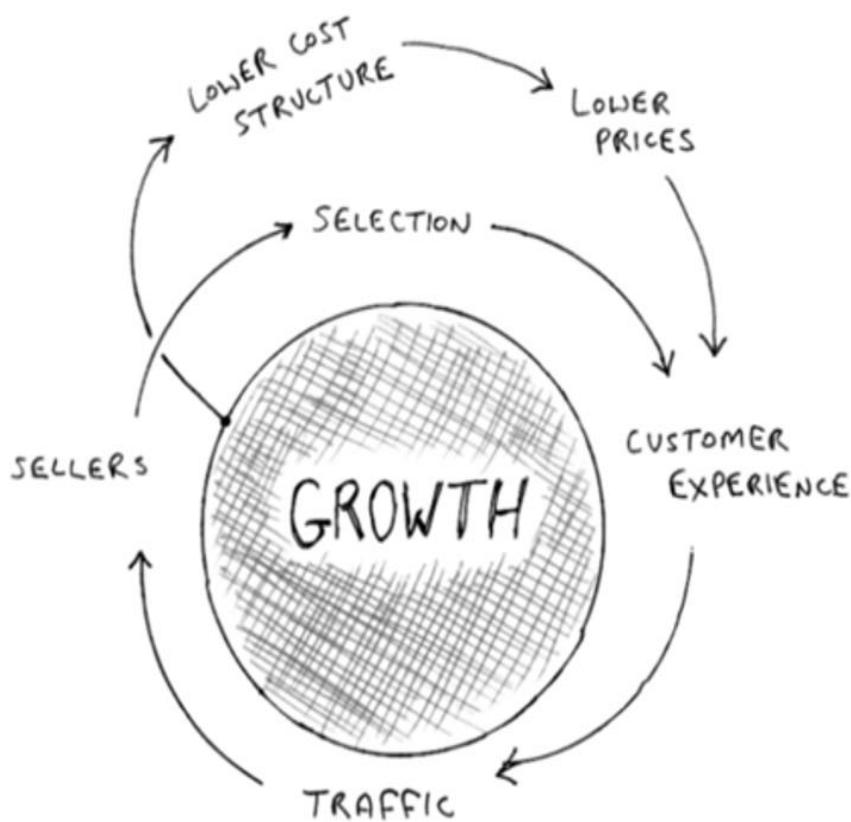


Figure 4: Virtuous cycle of Amazon

Amazon CEO Jeff Bezos created the "Virtuous Cycle" (Uenue, 2018), representing the company's growth philosophy. We can see that customer experience is well placed in this cycle. Amazon used various customer experiences such as personalised recommendations, fast shipping, and simple returns. By combining all of these elements, Amazon created a paradigm that is now used by every company in terms of customer experience. And it is by far one of the most effective methods of building customer loyalty. It is a fact that if a company does not grow, it will eventually fail. In this regard, Amazon now has a new way to improve its customer experience by leveraging Industry 4.0.

Firstly, AI and machine learning analytics can allow the company to personalise experiences to the individual customer. For instance, the ability of Alexa, the intelligent personal assistant created by amazon using AI, to offer personalised service is one of the most attractive values that customers can benefit from. In this regard, Amazon should invest more in such products and services in order to increase customer loyalty. (Klaus, 2013)

Secondly, virtual reality will allow the customer to experience the product without having them in reality. Finally, for all of Amazon's IoT-enabled products, the company could launch a

service that detects if the product is about to fail or requires maintenance and then contacts the customer to fix the problem at a low cost.

With these three suggestions for customer experiences, the customer will be presented with a new approach that he will surely appreciate. And let's not forget the most significant advantage that Amazon offers its customers in terms of price. It is obvious that the gap between its competitors will be more important.

VII. DYNAMIC ORGANISATIONAL CAPABILITY

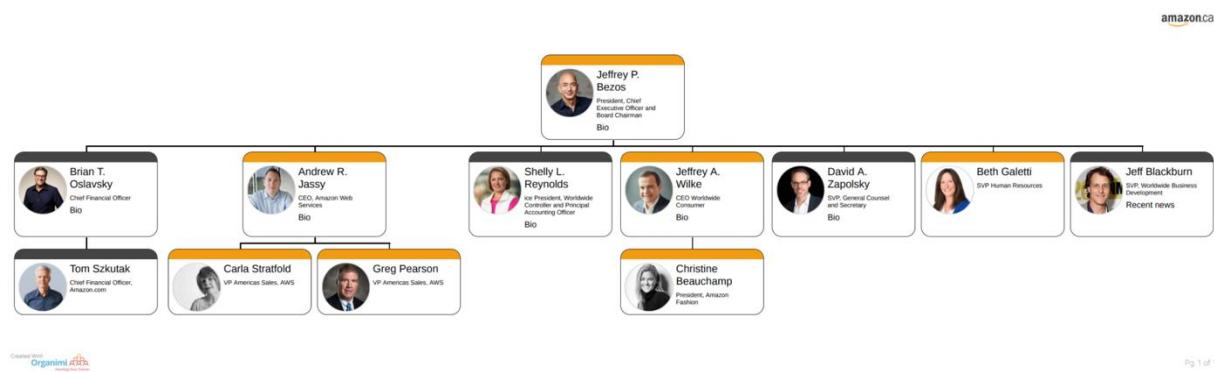


Figure 5:The Amazon organisation (Organimi, s.f.)

Amazon is a company that is well organized, from the CEO at the top to drivers and operators following suit. However, the company has a vertical hierarchical approach. On July 5, 2021, Jeff Bezos left the position of CEO that he held since July 5, 1994. But remains president of the board of directors of Amazon. (stone, 2014)

Nearly all of the decisions are taken by the board of directors of Amazon, which consists of 12 members. Throughout his career, Bezos made several decisions. Most of the time, they were good decisions, but sometimes they weren't. For instance, the investment in pets.com in march 1999 with around \$10.5 million. (Thornton & Marche, Sunny, 2003)or even amazon wallet, which the company invested a massive amount to lunch in 2014 but failed to gain significant traction compared to apple pay; these two failures have certainly raised many questions about Amazon's decision-making process. (Failory, s.f.)

It's recommended that the decision-makers take the company's major strategic decisions because failures in this stage can be a disaster for its growth.

On the other hand, if we go down in the decision scale, Amazon is organized into teams. Each team is running a particular business. That is to say, far from classical tasks like production or marketing, for example. Teams work like a small company, which allows the company to benefit from a faster decision-making process. And at the same time, employees feel more

involved as they see the impact of their work. Furthermore, sometimes the lack of collaboration affects the company's effectiveness, but since this system has done an excellent job, It's suggested that the company builds further on it. (objective outlook, 2017)

VIII. CONCLUSION

In this article, as a first step, we have explored how Amazon could benefit from the technologies given by Industry 4.0 as a lever to develop its supply chain by recommending some steps the company should take. For example, investing heavily in the research and development of the AWS cloud computing solution, such an effort will not only allow Amazon to be the market leader in the cloud industry but also all its subsidiaries will directly benefit from the software and technology that AWS teams develop. In addition, an important action to take is the acquisition of startups that have the potential to offer cutting-edge technologies that will benefit Amazon, such as the acquisition of the Kivas system discussed in this report. Not to be overlooked is the potential of AI, machine learning, IoT, and VR to improve the customer experience, which the company already excels at. All of these steps necessitate the use of a solid information system to manage all of these technologies. To do so, it must strengthen all of its information security against cyber-attacks.

Finally, our report demonstrated that efforts to implement Industry 4.0 technologies alone are insufficient, necessitating other management decisions. To avoid unilateral decisions, the decision must be made by the entire Board, not by one person. Furthermore, the company's mission, which is primarily focused on one sector and cannot be projected to the other sectors in which Amazon operates, must be changed.

IX. REFERENCING

1. Uenlue, M., 2018. Amazon Business Model: Three customer value propositions. [En ligne] Available at: <https://innovationtactics.com/amazon-business-model-part-2/> [Accès le 14 November 2021].
2. Failory, s.d. Amazon Wallet. [En ligne] Available at: <https://www.failory.com/amazon/wallet> [Accès le 19 November 2021].
3. objective outlook, 2017. Amazon works because of its org structure. [En ligne] Available at: <https://medium.com/@objoutlook/amazon-works-because-of-its-org-structure-22efc8ed1002> [Accès le 20 November 2021].
4. Fund, I. M., 2021. RECOVERY DURING A PANDEMIC. [En ligne] Available at: <https://www.imf.org/en/Publications/WEO/Issues/2021/10/12/world-economic-outlook-october-2021> [Accès le 3 November 2021].
5. Marketing Tutor, s.d. Pestle Analysis of Amazon. [En ligne] Available at: <https://www.marketingtutor.net/pestle-analysis-of-amazon/> [Accès le 3 November 2021].
6. NICOLÁS, E. S., 2020. EU carbon border tax to target imports from 2026. [En ligne] Available at: <https://euobserver.com/climate/152460> [Accès le 4 November 2021].
7. Martin, A., 2021. Sky news. [En ligne] Available at: <https://news.sky.com/story/twitch-confirms-data-breach-as-million-dollar-payouts-to-games-streamers-leak-online-12428914> [Accès le 2021].
8. SureshKotha, 2000. Competing on the Internet:: The case of Amazon.com, Seattle: University of Washington.
9. Bogue, R., 2016. Growth in e-commerce boosts innovation in the warehouse robot market, s.l.: Emerald Group.
10. Zheng, Q. & Paul Mueller, 2021. An Overview of the Zoox Smart Automatic Thermal Control Design-- An Autonomous Electric Taxi, s.l.: IEEE.
11. Mathew, S., 2014. Amazon Web Services, s.l.: s.n.
12. stone, B., 2014. The everything storee, s.l.: Hachette Book Group.
13. Thornton, J. & Marche, Sunny, 2003. Sorting through the dot bomb rubble: how did the high-profile e-tailers fail?, s.l.: International Journal of Information Management.
14. Cockcro, A., 2010. Netflix in the Cloud, s.l.: s.n.

15. Bennett, J. & Stan Lanning, s.d. The Netflix Prize, San Jose, California: KDD Cup and Workshop.
16. Klaus, P., 2013. The case of Amazon.com: towards a conceptual framework of online customer service experience (OCSE) using the emerging consensus technique (ECT), s.l.: Journal of services marketing.
