

Critical Analysis of Sustainable Development Goal 13 Climate Action: A Case Study of Amazon

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Abstract: *It is well known that the massive production of greenhouse gases is causing global temperatures to rise. It is worth considering whether Amazon, the world's leading e-commerce company and one of the most popular brands, is currently taking steps to support Sustainable Development Goal 13(SDG 13) on climate change. This research will examine Amazon's stakeholder efforts to support SDG 13 and explore stakeholder behavior using a disciplined stakeholder analysis. This research will make recommendations for Amazon.com to reduce the number of deliveries and invest in new technologies, but it is clear that the downsides of these recommendations are also evident.*

Keywords: *Amazon, SDG 13, Climate action, Net-zero carbon*

1. Introduction

Due to Amazon's position in the e-commerce world and the global concern over the issue of climate change, it is important to choose to discuss Amazon and SDG 13, specifically on Amazon's move towards net-zero carbon.

At the beginning of 2016, the 17 Sustainable Development Goals (SDGs) adopted by world leaders in 2015 with the 30-year sustainable development agenda were officially launched (United Nations, 2021^[1]). The most striking feature of the 2030 agenda in comparison to other sustainable development is its universality and indivisibility (Bennich, & Carlsen 2020^[2]). In other words, this agenda applies to all countries, and its implementation is integrated and cannot be acted upon in isolation. Therefore, promoting sustainable development requires all countries of the world to work together and take action.

This research will focus on SDG 13 (action on climate change. Specially focus on 13.2 and 13.3. 13.2 is “Integrate climate change measures into national policies, strategies and planning”. 13.3 is “Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning”

This research will critically analyze and make recommendations on the actions taken by Amazon.com (Statista, 2022^[3]), a global e-commerce leader, to address climate change (in terms of moving towards net-zero carbon). The United Nations continues to encourage all stakeholders to take action to reduce the impact of climate change (United Nations, 2021). Therefore, the research argues that Amazon should look at every element of the entire supply chain to find ways to reduce deliveries, increase investment in technology, etc. It is also important to consider that these initiatives have a negative impact.

2. Literature Review

SDG 13, 'Take urgent action to address climate change and its impacts includes five sub-goals and is one of the 17 Sustainable Development Goals (SDGs) designated by the United Nations in 2015 (United Nations 2021a). This research focuses on the relationship between climate change and net-zero carbon. Such education is in short supply.

First, focus on 13. 13.2 is “Integrate climate change measures into national policies, strategies and planning”. 13.3 is “Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning” From 1880 to 2012, global temperatures rose by 0.85°C (United Nations 2021a). Net Zero Carbon is one of the climate actions that can help achieve SDG 13. 2020 sees the start of Amazon's Climate Commitment Friendly program,

which uses sustainability certification to help protect their products in the natural environment. ("Enabling Sustainability for Our Customers", 2022^[4]). At the same time, Amazon has announced that it has partnered with third parties and created its own certification, impact by design, to certify products that meet sustainability standards and help them protect the natural environment. ("Amazon.com: Climate Pledge Friendly", 2022). This is in line with Driscoll & Starik's (2004^[5]) suggestion that 'The natural environment can be identified as the primary stakeholder of the firm in its own right'. The research, therefore, argues that Amazon, as a large and mature company, should take primary measures to reduce carbon emissions in the production chain of its suppliers and shareholders, in addition to modest attempts to reduce carbon emissions at the consumer level and move towards net zero carbon, in order to protect the natural environment and combat climate change.

Secondly, focus on the factor that affects climate change: carbon emissions. The Intergovernmental Panel on Climate Change IPCC (2007) report suggests that global warming has become a major issue of our time. The problem seems to be exacerbated by the increasing global emissions of carbon dioxide (Soytas, & Sari, 2009^[6]), and as global carbon emissions continue to grow along with the economy, it is difficult to complete the Paris Agreement that will come into force in 2016 (Adams & Acheampong, 2019^[7]). Therefore, it is vital to find the factors that influence it. The manufacturing of products and manufacturing processes in manufacturing are directly related to the amount of carbon emitted (Jeswiet & Kara, 2008^[8]). In the Amazon chain, the manufacturing process of the supplier's products generates large amounts of carbon dioxide, which contributes to global warming. In addition to this, it is evident that this is also the case during the transportation and storage of goods on Amazon. According to the Amazon Carbon Footprint (2022^[9]) "While Amazon's business grows significantly in 2020 and our absolute carbon emissions increase by 19% over the same period, our overall carbon intensity decreases by 16%, from 122.8 grams of CO₂e per dollar of GMS in 2019 to 102.7 grams of CO₂e per dollar of GMS in 2020. 102.7 grams of CO₂e GMS in 2020. Therefore, there is an urgent need for Amazon to take action to reduce its impact on climate change.

3. Amazon at a glance

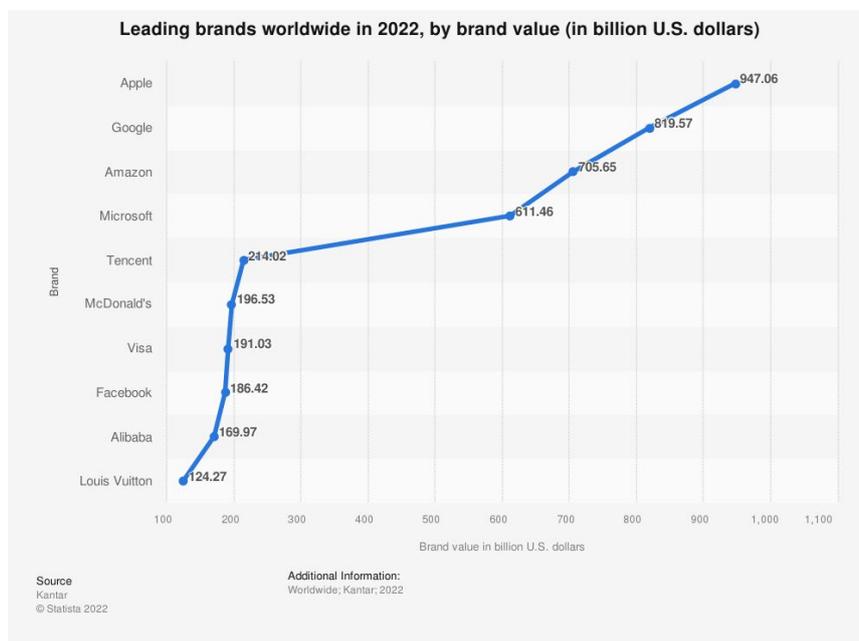


Figure 1: Leading brands worldwide in 2022, by brand value (in billion U.S. dollars)

Amazon.com was the first company to move book retailing from offline to online (Machlis, 1998^[10]). Today, "Amazon.com is an international e-commerce company that offers online retail, computing services, consumer electronics, digital content and other local services such as daily deals and groceries." (Statista, 2022). Due to its worldwide popularity and influence, Amazon is considered one of the most influential brands in the world. (Statista, 2022)

Figure 1 shows that Amazon leads in brand value compared to other e-commerce companies in 2022, being 1.2 times more valuable than US tech giant Microsoft Corporation and four times more valuable than Alibaba, China's largest e-commerce platform. This speaks volumes about Amazon.com's

business value and leadership position. In addition to this, Figure 2 shows that Amazon's turnover in the UK continues to grow from 2010 to 2021, rising from \$39,304 million to \$162,360. It is worth noting that Amazon's turnover does not decrease and even grows more during the epidemic period from 2019 to 2022. The devastating impact of job losses, unpaid leave and pay cuts in the wake of the epidemic reinforced the need for savings, cash reserves and reduced discretionary spending. However, health and safety concerns have further accelerated the shift in consumer behaviour towards online shopping, in-store pick-up and home delivery, whether you are buying groceries or personal computers.

It is worth noting that Amazon has been expanding globally as an international company because the goal of Internet companies to build and develop competitive advantage is an international marketing strategy (Javalgi et al, 2005^[11]).

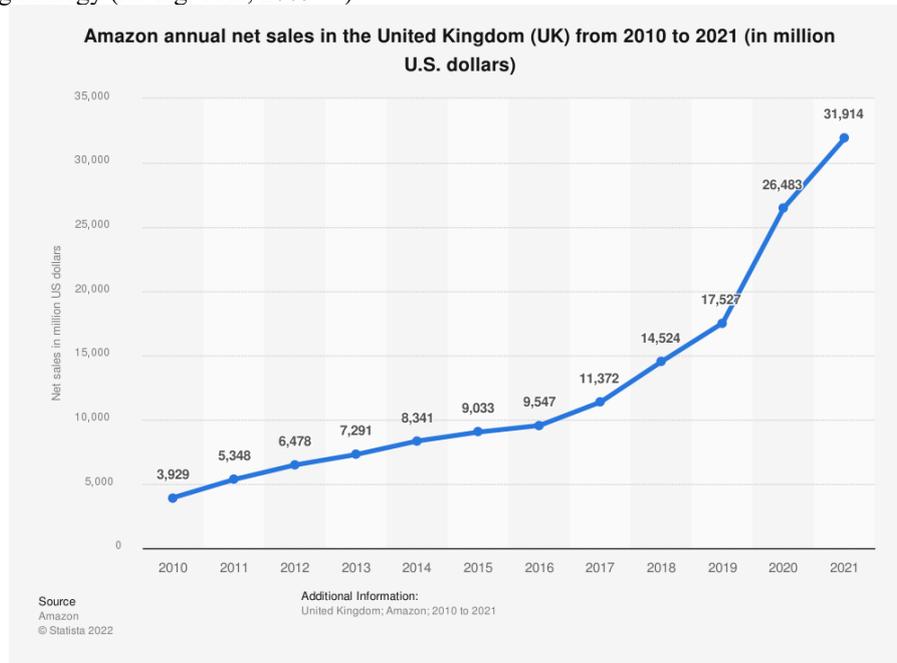


Figure 2: Organizational Theory: Amazon and SDG 13 Analysis

For Amazon, the customer is the most important stakeholder. According to the stakeholder typology three relationship attributes are involved power, urgency, and legitimacy. (Mitchell et al., 1997). One of the three attributes involved is the most explicit stakeholder, the customer. Customers are able to generate profit for Amazon, and profit is precisely what the company values most. Other key stakeholders involved in other factors are the suppliers and Amazon's investors, i.e. shareholders.

The accuracy, instrumental power, and normative validity of the descriptions in stakeholder theory have been examined in the current literature (Donaldson & Preston, 1995^[12]). One of the most important of the stakeholder theories is the normative stakeholder approach. It defines how firms should operate, particularly at the ethical level (Wagner et al., 2011^[13]). Defenders of this view develop alternative descriptions of business so that managers can interact with stakeholders at a high ethical level. They focus on what the focus of the company's development is, including the goals and means it pursues (Jones & Wicks, 1999^[14]). Applied to Amazon.com, this means that Amazon.com is concerned with the company's profits and pursues to make the customer experience a great shopping experience and logistics experience, regardless of the amount of CO₂ generated. And Amazon is generally interested in having a good relationship with its suppliers. However, a customer-first attitude regardless of climate change clearly runs counter to the SDG 13 goal of moving towards net-zero carbon that Amazon.com wants to take on.

To achieve the SDG 13 goal of climate change in harmony with the goal of serving customers, Amazon's other stakeholders contribute to this, and Rowley (1997^[15]) shows that from a stakeholder perspective, communication in a regulated environment aligns the common expectations of companies in the stakeholder environment. As a result, other Amazon stakeholders: shareholders (investors) are involved in the Paris Agreement and are working towards its realization. This is demonstrated by "regularly measuring and reporting greenhouse gas emissions and implementing decarbonization strategies through business change and innovation in line with the Paris Agreement, including efficiency improvements, renewable energy, material reductions, and other carbon emission elimination

strategies" ("Net-zero carbon by 2040", 2022^[16]). In this theory, the impact on suppliers seems to be positive. By selling within an ethical code, Amazon is able to provide suppliers with a good trading environment and the right prices. Instead of crazy price pressures due to lost profits, which would lead to bad consequences. This may not pose a risk to suppliers unless they firmly refuse to pay attention to carbon emissions.

Driscoll & Starik (2004) suggest that 'The natural environment can be identified as the primary stakeholder of the firm in its own right This is a two-sided approach to the environment. On the one hand, Amazon's philosophy of putting the customer first, regardless of the environment, is harmful to the climate; on the other hand, Amazon is constantly seeking a balance and finding ways to try to meet the Paris Convention. Even if there are still some gaps, it is better to try than to remain unconcerned.

Finally this theory is evaluated for customers. They are the most important people to Amazon, the ones who can bring profit to the other stakeholders involved in Amazon. Focusing on SDG 13 can also bring benefits to the wider environment in which consumers live, which means that consumers actually share Amazon's expectations. They both expect that some climate measures will be taken to improve climate change. For example, by reducing greenhouse gas emissions and slowing global warming

In fact, even if this could benefit Amazon in terms of environment and reputation, it is partly due to common expectations and partly due to the need for governments with absolute power to guard the SDG 13 objectives and the fulfilment of the Paris Pact. Absolute power cannot be resisted. At the same time, Amazon is well aware that the pursuit of the SDG 13 objectives will inevitably result in some economic losses along the way. However, economics and the environment have traditionally seemed to be incompatible. Therefore, balancing the pursuit of the goals with the pursuit of economic benefits requires Amazon to reconcile multiple stakeholders in order to achieve them.

4. Recommendation and limitation

4.1. Recommendation

4.1.1. Reduce the number of deliveries and popularise new energy vehicles

Reduce the number of deliveries, and popularise the use of battery or other new energy vehicles throughout the supply chain.

For Amazon prime, there is one-day delivery, while other users have the option to have their parcels delivered centrally on Amazon Day thus reducing the number of deliveries and packaging. This is a contribution that Amazon is already making towards achieving net-zero carbon. This research suggests that for example amazon fresh, Amazon could reduce the number of deliveries by reducing the time period available for delivery. In addition, as the main source of carbon emissions is transportation (Pamucar et al., 2021^[17]), this research suggests starting with another important stakeholder of Amazon, the suppliers (Wagner et al., 2011). For example, the entire supply chain of transport from suppliers to warehouses and from warehouses to consumers' homes should be promoted to electric vehicles, reducing fossil fuel consumption and contributing to Amazon's efforts to move towards net-zero carbon.

Due to the fact that Amazon Fresh gives consumers the freedom to choose delivery times from 7 am to 9 pm. Even if the grocery shop on the hunt is no longer able to deliver, Amazon still upholds the attitude of customer service. While this satisfies the needs of consumers, it inadvertently adds a lot of labor costs and greenhouse gas emissions. Therefore, it is recommended that the starting delivery amount of Amazon fresh produce be increased and the delivery time period be reduced to contribute to the reduction of greenhouse gas emissions.

4.1.2. Increasing the share of investment funds for research into new energy sources

Invest a percentage more money in researching new sources of energy such as nuclear energy. Enabling it to play a role in manufacturing and transportation processes in the future, decarbonizing buildings, etc. Zero Carbon Net Building is also an important topic. Technological advances are widely considered as a way to reduce carbon emissions (Chen et.al., 2020^[18]). Nuclear energy as a new energy source has now become a new hot topic for application in production and life. Therefore, it is recommended that shareholders, as the most empowered stakeholders, should insist on sustainable development and invest in researching new technologies. This will not only contribute to the development of Amazon, but also to the world's contribution to climate change.

4.1.3. Carbon footprint quantification

Have suppliers and self-owned products indicate on the product shopping page and on the outside of the packaging the results of the carbon footprint quantification and whether the product is climate friendly. Amazon's corporate carbon footprint quantifies the total greenhouse gas emissions attributable to direct and indirect operational activities. It enables Amazon to measure greenhouse gas emissions. ("Carbon Footprint", 2022) Therefore, the inclusion of the carbon footprint and whether the product is climate-friendly on the product shopping page and on the outside of the packaging raises awareness of climate change among employees and consumers and encourages proactive action towards net-zero carbon.

4.2. Limitation

Limitation of Recommendation 1 Reduce the number of deliveries, and popularise the use of batteries or other new energy vehicles throughout the supply chain.

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It defeats the purpose of the business and annoys customers.

Amazon aims to serve its customers, and the move to reduce the number of deliveries will to some extent annoy them. It is therefore recommended that Amazon adopt this approach gently, for example by starting with a fixed delivery twice a week for those customers with less than perfect credit, rather than daily deliveries. This would go some way towards reducing the number of deliveries and lowering the carbon footprint. At the same time, the aim of maintaining the customer as an identified stakeholder can be maintained (Myllykangas et al., 2011^[19]). However, this may also result in a loss of reputation for Amazon, as well as a loss of users and a reduction in profits due to this segment of users with poor credit. However, despite this, it is an extremely brave attempt to move towards net-zero carbon.

5. Conclusion

In summary, the research concludes that Amazon does make a positive contribution to achieving its climate commitments and supporting SDG 13. However, there are many challenges for Amazon to further support the achievement of the SDGs. Therefore, Amazon needs to convince all stakeholders as defined in the stakeholder typology (Mitchell et al., 1997) to move towards net-zero carbon by adopting a reduced number of deliveries, increased investment in technology research and development, and packaging labeling, while potentially sacrificing economic benefits.

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