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**Public Opinion about Sweden during the COVID-19 Pandemic and  
Implications for its Nation Brand:  
A Sentiment Analysis**

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# Abstract

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## **Public Opinion about Sweden during the COVID-19 Pandemic and Implications for its Nation Brand: A Sentiment Analysis**

This thesis seeks to expand the understanding of nation brand image perceptions by exploring the opinions of international audiences about Sweden during the COVID-19 pandemic in the form of sentiments. Given the strong link between a country's handling of the COVID-19 pandemic and its nation brand, crises can have an impact on the perception of a country's image. Thus, this thesis aims to contribute to the field of nation branding and public diplomacy by problematizing the notion of nation brand image perceptions in the context of pandemics. A sentiment analysis (SA) of 195.745 tweets between the 27<sup>th</sup> of January 2020, and the 19<sup>th</sup> of February 2022 was conducted to comprehensively explore international audiences' opinions about Sweden during the COVID-19 pandemic. Conclusions were drawn about the implications this might have for Sweden's nation brand. This study adopts a strategic communication lens by taking a holistic view on the relation between context and publics. Emphasis lies in listening to external audiences as images of places are strategically constructed and simultaneously shaped by people.

*Keywords:* Nation Branding, Public Diplomacy, Nation Brand Image Perception, COVID-19 Pandemic, Sweden, Twitter, Sentiment Analysis (SA).

*Word Count:* 19.834

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# 1. Introduction

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*“Perception, unfortunately always trumps reality.”*

– Simon Anholt, founder of the term ‘nation brands’ and the Anholt-Ipsos Nation Brand Index.

With this statement, Simon Anholt highlights the power of perception by illustrating that a positive or negative perception about a country can either strengthen or weaken the attention of people and the nation brand image of a country (Anholt, 2011).

Nations are invested in how their nation brand is perceived as there is a direct connection between a destination’s positive image and its attractiveness to tourists (Avraham, 2018). Similarly, there is evidence that nations associated with negative images and perceptions internationally are also negatively impacted by decreasing investments, tourism, commerce and international status (Avraham, 2018). This shows that a positive and powerful nation brand can create an essential competitive advantage in today’s globalized economy (Dinnie, 2016).

Crises are complex events that can affect perceptions of a nation which can damage the nation’s overall image and brand over time. Whether natural or produced by humans, crises will always arise and have devastating negative impacts on economies, health, and national and global security (Qiu et al., 2018). Consequently, crises can pose a risk to strong and positive nation brands with far-reaching and profound consequences. How well a nation handles crises can also impact a country’s national image.

The COVID-19 pandemic is an example of a complex global crisis. “It is time to open Sweden up again”. With these words Sweden’s Prime Minister Magdalena Andersson announced the lifting of Sweden’s COVID-19 pandemic restrictions from the 9<sup>th</sup> of February 2022, after almost two years of living with the pandemic (Reuters, 2022a).

The World Health Organization (WHO) defines COVID-19 as “an infectious disease caused by the SARS-CoV-2 virus” (World Health Organization, 2022, para. 1) and as one of the “greatest challenges that the humankind faced since the 2nd World War” (Chakraborty & Maity, 2020, p. 1). In 2019, the discovery and the rapid spread of COVID-19 confronted countries worldwide with an unprecedented global challenge. Countries have followed different strategies to combat the pandemic, and the spread of the infectious virus is closely interrelated to the management methods of each country (Han & Xu, 2021).

In pandemics, “public health outcomes are not the only variables at stake” because nation brands and influence are also at risk (Lee & Kim, 2021, p. 383). The COVID-19 pandemic has introduced changes in how nations exercise soft power. A nation’s ability to project influence now largely depends on how it has responded to the pandemic. The measures taken by the government to combat the pandemic will similarly affect the public evaluation of the government (Lee & Kim, 2021; Shammi et al., 2020). Countries which have responded effectively to the pandemic, for instance, South Korea and Taiwan (The Republic of China), will find themselves more influential with a better reputation among international audiences (Snyder and Sindyukov, 2020).

Additionally, social media platforms have been critical for the quick dissemination of information by providing interaction among users during the COVID-19 pandemic. These platforms encouraged users to form communities, raise their voices and express opinions. Thus, digital interactions on social media can change how a country is perceived (Sevin & Ingenhoff, 2018).

Overall, more research needs to be conducted to illuminate the role of nation branding and public diplomacy in times of pandemics (Lee & Kim, 2021). Hence, this study aims to enrich existing literature and contribute to nation branding and public diplomacy by problematizing the notion of nation brand image perceptions in the context of the ongoing COVID-19 pandemic.

Taking Sweden as a case example could be particularly relevant as it followed an exceptional less invasive COVID-19 strategy without national lockdowns (Ludvigsson, 2020). Therefore, exploring the opinions of international audiences about Sweden during the COVID-19 pandemic in the form of sentiments will provide valuable insights into the perception of Sweden during the COVID-19 pandemic. After that, implications this might have on its nation brand in the context of pandemics are identified.

On the one hand, this is of relevance for actors like the Swedish Government and the NSU (The Council for the Promotion of Sweden), including the Swedish Institute, to learn about the COVID-19 pandemic, future crises and pandemics. Listening to external publics is significant to be able to strategically adapt their nation branding and tourism strategies to be more suited to the needs and interests of international audiences. On the other hand, this study makes significant contributions to nation branding and public diplomacy by emphasizing the importance of nation brands on an individual level, being an embodiment and reflection of individual national identity and providing insights into the power of opinion formation on social media platforms.

## 1.1 Research Problem and Relevance

From a strategic communication perspective, an organization's communication creates, adjusts and maintains the image and perception of the organization, its fundamental values and activities (Falkheimer & Heide, 2018). A positive image is linked to the attractiveness for tourists, increasing economic and reputational status, which is a desirable goal for nations (Avraham, 2018). Nations also pay significant attention to how their nation brands are perceived by international audiences (Lee & Kim, 2021). It is pointed out that how nations respond to and communicate during crises impact a country's image (Shammi et al., 2020). Regarding its people, companies, and institutions, governments are responsible for monitoring and measuring the world's perception of their nation, and creating a strategy to manage it (Anholt, 2011).

Throughout the past years, several studies have addressed nation branding and public diplomacy in times of crisis or conflict (Lee & Lin, 2017; Cassinger et al., 2016; Pejuna et al., 2009), but there is an apparent lack of understanding these concepts in the context of a pandemic.

The way nations handle pressing global issues impacts their international reputation (Ipsos, 2021). This suggests that nations which gained favorability during the COVID-19 pandemic have a unique opportunity to attract international audiences in these unprecedented times. In contrast, those with losses in favorability have to work actively to regain trust (Ipsos, 2020).

Thus, this study aims to contribute to nation branding and public diplomacy by problematizing the notion of nation brand image perceptions in the context of pandemics. Literature has covered different periods of Sweden's COVID-19 strategy and how its strategy has differentiated from other countries (Pierre, 2020; Giritli Nygren & Olofsson, 2021; Ludvigsson, 2020; Lindström, 2021). However, no study to date has examined the opinions of international audiences about Sweden during the whole COVID-19 pandemic on Twitter. From the beginning of the pandemic end of January 2020 until February 2022, when Sweden announced the end of the COVID-19 restrictions. Generally, the COVID-19 pandemic is divided into four waves (first wave: March – July 2020, second wave: October – March 2020, third wave: March 2021 – June 2021, fourth wave: December 2021 – February 2022) (World Health Organization, 2022).

Taking a look at qualitative data and highlighting all the associations in the minds of target audiences is of more value to communication professionals than quantitative nation brand indexes because they do not provide the opportunity to explore the target audiences' opinions,



judgements, and emotions (Sevin & Ingenhoff, 2018). Brand Finance measures the strongest and most valuable nation brands yearly in its Global Soft Power Index. In 2021, they added a new metric containing how respondents perceived countries to have handled the COVID-19 pandemic (Brand Finance, 2021). This emphasizes a strong link between a country's handling of the COVID-19 pandemic and the strength of its nation brand.

Besides economic reasons, such as increasing tourism and expanding global power, this study is also relevant on an individual level as nation branding has consequences for how people view themselves, how people are treated in the world, and how people travel. Thus, a nation brand can be classified as an embodiment and reflection of an individual national identity (Torelli, 2021). This highlights the importance for governments to strengthen its nation brand and build trust.

Additionally, through a strategic communication lens, it is essential to systematically listen to external and internal stakeholders to create organizational trust (Heide & Falkheimer, 2018). Organizational listening can be understood as the appraisal “of the culture, policies, structure, processes, resources, skills, technologies and practices applied by an organization to give recognition, acknowledgement, attention, interpretation, understanding, consideration, and response to its stakeholders and publics” (Macnamara, 2015, p. 19). Listening to the outside world needs to be strengthened, and different voices need to be valued and actively listened to, as this is the only way for an organization to adapt to change, develop and progress (Heide et al., 2018). Communication constitutes an organization, which is enacted through formal and informal communication between organizational members. However, citizens, distributors, consumers, stakeholders, and stockholders are also crucial for producing pictures and understandings of an organization – a certain image (Heide & Falkheimer, 2018). Hence, employees and external stakeholders significantly impact how the organization is perceived and understood (Heide et al., 2018).

Nations are viewed as ‘imagined communities’ which are socially constructed and shaped through everyday practices (Anderson, 2002). Thus, communication processes underlie different types of organizations, including nations.

A strategic communication perspective demands adopting a holistic view on the relation between context, publics and communication strategies, as images and places are strategically constructed and, at the same, time shaped by people (Cassinger, 2020). Consequently, publics play an essential factor in strategic communication. Understanding publics and investigating how public opinion forms in the context of pandemics is significant for a government and part of strategy building. In this strand of thinking, nations can be seen as organizations that need to

listen to conversations of publics on Twitter about their handling of the COVID-19 pandemic, as these opinions might impact their nation brand image (Sevin & Ingenhoff, 2018).

Additionally, the rise of new technologies and social media platforms has changed how we communicate and encourages users to build communities and voice their opinions through which they shape places (Sevin & Ingenhoff, 2018). Thus, this study is also relevant due to highlighting the power of opinion formation on social media platforms.

Finally, gaining insights into how international audiences discuss Sweden during the COVID-19 pandemic will allow drawing implications this might have on the strategic construction of Sweden's nation brand image. The results will provide valuable information for actors like the Swedish Government and NSU, including the Swedish Institute, to learn from the COVID-19 pandemic for future crises and pandemics and, if necessary, adapt their nation branding and tourism strategies in alignment with the international audiences' needs. Results will also provide insights into the role of pandemics, the opinion formation of international audiences online, and the power of social media platforms.

## **1.2 Study Aim and Research Questions**

As elaborated before, this study aims to problematize the notion of nation brand image perceptions in the context of pandemics. More specifically, this study aims to contribute to the field of nation branding and public diplomacy by examining international audiences' opinions about Sweden during the COVID-19 pandemic and what implications this might have on its nation brand image. In addition, it has been illustrated that a nation brand can either be strengthened or weakened based on how people perceive it has handled the COVID-19 pandemic (Brand Finance, 2021). International audiences' opinions in the form of sentiments will be researched to identify if Sweden's nation brand might be impaired or fortified based on these public opinions.

In order to address the aim of this study, the following two research questions are formulated:

***RQ1.*** *How do international audiences discuss Sweden during COVID-19 on Twitter?*

The first research question investigates the opinions about Sweden during the COVID-19 pandemic from the viewpoint of international audiences who built communities and voice their opinions on Twitter. Identifying the nature of their opinions about Sweden during the COVID-19 pandemic is crucial to identify the implications it might have for Sweden's nation brand.

*RQ2. Have international audiences' opinions about Sweden changed during the four 'waves' of the COVID-19 pandemic on Twitter? If so, how?*

In this instance, the aim is to provide a more holistic understanding of the phenomenon of nation brand image perception in the context of pandemics by examining if the opinions about Sweden remained the same throughout the whole pandemic or if there have been changes in the opinions based on the different 'waves' of the COVID-19 pandemic.

### **1.3 Delimitations**

It is vital to consider that this thesis will not focus on Sweden's practice of building a strong nation brand strategy to create a strong nation brand image. The main focus is also not on how Sweden has communicated its COVID-19 strategy. It will instead address the opinions of international audiences about Sweden during COVID-19 from the start of the pandemic in January 2020 until February 2022.

This thesis will provide valuable insights into opinions about Sweden during COVID-19 in the form of sentiments and thus create the foundation for further studies to explore if there is a correlation between public opinions about Sweden during COVID-19 and its nation brand. Future research should conduct longitudinal studies as it is argued that due to the novelty of this pandemic, it is still too early to measure the impact at this point in time.

### **1.4 Disposition**

This thesis is structured in the following way. The contextual background follows the introduction and provides background information about Sweden's nation brand, and outlines Sweden's COVID-19 strategy. The contextual background is followed by the literature review, which presents an overview of different conceptualizations of nation branding and public diplomacy, and government practices regarding crises and the COVID-19 pandemic. Then, the theory chapter provides the overarching concepts of nation branding theory, nation brand identity and image, and nation brand equity (NBEQ). After that, the methodology is described, including the epistemological standpoint, research design, ethical considerations and limitations. The empirical findings and discussion will follow to understand how international audiences discussed Sweden during COVID-19 and what implications this might have for its nation brand by linking it to the literature and theories used in this study. The thesis ends with a conclusion outlining recommendations for future research.

## **1.5 Contextual Background**

### ***1.5.1 Nation Brand Sweden***

In the past, the Nordic countries have used values such as “cooperation, consensus, solidarity, democracy, freedom, social cohesion, and gender equality” to construct themselves with particular relevance for place branding (Cassinger et al., 2019, p. 4). Cassinger et al. (2019) define the Nordic in general terms as an idea, a myth, an ideological orientation, and a regional space that allows concepts, theories, and practices of place branding to emerge. The Nordic region covers Sweden, Norway, Denmark, Finland, and Iceland, as well as the provinces and regions of the Faroe Islands, Aaland Islands, Greenland and the Inuit land areas (Cassinger et al., 2019).

The attempts of Sweden to influence the external image of its country can be traced back centuries. However, it has been consistent in investing in public diplomacy, public relations, and recently in nation branding since the founding of the Swedish Institute in 1945 (Valaskivi, 2016). The Swedish Institute is a public agency to promote a positive image of the country to foreign publics and develop its international relations to enhance Sweden’s attractiveness (Swedish Institute, 2021). One of their primary responsibilities includes analyzing how foreign publics perceive Sweden, and the impact it has on opportunities for Swedish actors abroad (Swedish Institute, 2021).

The Council for the Promotion of Sweden (NSU) was formed in 1995, a cooperation committee that is concerned with the promotion of Sweden abroad. Nowadays, the NSU consists of Invest in Sweden Agency, the Swedish Trade Council, SI, SMFA, the Ministry of Enterprise and Innovation, and VisitSweden (Cassinger et al., 2016).

It can be argued that with the establishment of the Swedish Institute, public diplomacy and nation branding have gained importance and have become of more considerable interest to the Swedish Government. Several documents, such as *Sverigebild* (Brand Sweden) and *Sverigebild 2.9: Vägen till en uppdaterad Sverigebild* (Brand Sweden: The way to an updated image), have been introduced, which analyze how Sweden could be communicated to foreign publics competitively and consistently (Valaskivi, 2016). This shows that the Swedish Institute is greatly concerned with shaping the Swedish nation brand.

Sweden’s image can be described in three words: welfare state, ultra-modern, and egalitarian community (Lerøy Sataøen, 2021). Sweden is seen as the “edible country” with its nation-branding strategy built on the vision of “we increase interest in Sweden” (p. 337). Additionally, Sweden represents itself as a country that values its nature, Swedish Viking heritage, and ‘fika’ as a source of happiness and part of a lifestyle (Lerøy Sataøen, 2021).

Formally Sweden launched its nation brand in 2007, defining itself as a progressive country “focused on development based on people’s needs and environmental conditions” (Swedish Institute, 2008, p. 6). The core values of being authentic, open, innovative, and caring differentiate Sweden from other countries with a contemporary, new image of Sweden (Swedish Institute, 2008). Glover (2009) emphasizes the increased importance of the Swedish Institute, which is nowadays organized under the Ministry of Foreign Affairs. It has developed from an education institution, in the post-war era, to a marketing agency nowadays that aims to ‘share Sweden with the world’. This shows that the state has been actively involved and made conscious efforts to develop and shape its nation brand.

In October 2021, Brand Finance released its annual report on the strongest and most valuable nation brands. The report includes the Global Soft Power Index, which measures the view of a nation brand based on its reputation, presence and impact on the world stage (Brand Finance, 2021). According to the Nation Brands 2021 report, Sweden is ranked number nine out of one hundred nation brands in global soft power. Nations’ soft power on the world stage is assessed based on how the countries score in familiarity, reputation, and influence. Lastly, the three categories are applied to seven different power pillars related to soft power and three pillars related to the performance in tackling the COVID-19 pandemic. The metric of COVID-19 was newly added in 2021 (Brand Finance, 2021). The Nation Brand report shows that Sweden has a powerful soft power influence worldwide.

The survey Anholt-Ipsos-Nation Brands Index (NBI) was conducted in August 2021, collecting data in twenty countries about sixty countries in the categories of governance, culture, population, tourism, immigration, export, and investment (Swedish Institute, 2021). In 2021, Sweden was ranked number nine out of sixty countries. This survey shows that Sweden is perceived as a strong nation brand built on stability, high-quality life, innovation and technological development, and a well-functioning society (Swedish Institute, 2021).

### ***1.5.2 COVID-19 Strategy in Sweden***

In comparison to many other countries, Sweden has taken a distinct approach of managing the COVID-19 pandemic, characterized by less regulation, no lockdowns, and higher expectations of citizens and organizations of more voluntary action (Giritli Nygren & Olofsson, 2021). One of the most contentious debates during the COVID-19 pandemic has focused on Sweden’s strategy to reduce the spread of the virus (Pierre, 2020). Sweden’s ‘unique’ strategy of handling the COVID-19 pandemic has also become a field of interest for researchers and practitioners to explore further. In Sweden, on the 5<sup>th</sup> of March 2022 there have been 2,441,142

infections and 17,142 coronavirus-related deaths been reported since the pandemic began (Reuters, 2022b).

During the first eight months of the COVID-19 pandemic, the Swedish strategy focused on voluntary measures. Most health-related measures seem to have been followed by the public, due to the high public trust people have in the Government health agencies and the Swedish Government (Ludvigsson, 2020). In contrast to the recommendations of the WHO, mask-wearing was only advised in hospitals, personnel working in elderly homes, and people working with risk groups. Sweden's strategy in handling the COVID-19 pandemic has been highly different to many countries and has been praised and criticized (Ludvigsson, 2020). Yan et al. (2020) identify Sweden's COVID-19 response as an excellent example of a 'nudge' strategy that "is designed to change behaviors without prohibiting options or imposing upon individuals' freedom of choice" (p. 765).

The Swedish Government describes its COVID-19 strategy with the aim to reduce the spread of COVID-19 to safeguards people's live and ensure that the health care system will not be overstrained. High emphasis is stressed on protecting the elderly and risk groups with a weaker immune system. It also includes easing concern and anxiety, limiting the impact on critical services, alleviating the impact on people and businesses, and to implementing the suitable measures at the right time (Regeringskansliet, 2020). Working from home if possible, social distancing, staying at home when experiencing symptoms, and restricting larger gatherings of people have been efforts by the government to ease the curve of hospitalizations due to COVID-19. Thus, "herd immunity is not a strategic goal in and of itself but is more seen as a secondary outcome of the strategy" (Pierre, 2020, p. 482). Schools, gyms, restaurants, and shops have remained open throughout the spread of the pandemic (Yan et al., 2020).

The Oxford COVID-19 Response Tracker offers a systematic approach to tracking and comparing how COVID-19 responses of different governments have developed over time. The research team of Oxford University has created a composite index to update the stringency of government responses across countries over a long period. In comparison to China, Japan, and France, Sweden ranks the weakest on the stringency index due to a mild and advisory response (Yan et al., 2020). This emphasizes that Sweden has followed a distinctive COVID-19 strategy compared to other countries.

Another study taking a critical approach to Sweden's COVID-19 strategy suggests that the Swedish strategy has been characterized by individual responsibility, strong confidence in herd immunity, evidence-based medicine, and neglect to cooperate internationally. Additionally, there has been a lack of critical questions about Sweden's COVID-19 strategy

due to its top-down consensus culture and the mass media's financial dependence on the state (Lindström, 2021).

Most countries aimed to control the COVID-19 pandemic by social isolation, social distancing, mass testing, and contact tracing. In the second week of March 2020, Sweden, however stopped contact tracing and mass testing due to the recommendation of the Public Health Agency to limit testing for risk groups and hospital patients (Lindström, 2021). Sweden's strategy involved fewer and looser restrictions than its neighbouring countries, Norway, Finland, and Denmark (Lindström, 2021). In addition to that, Pierre (2020) points out two significant flaws in the Swedish COVID-19 pandemic strategy. One is the underestimation of the risk of asymptomatic people transmitting the virus, the other the overestimation of the capacity of nursing homes to protect the elderly and risk patients.

Olofsson and Vilhelmsson (2022) have created an extensive dataset reviewing media and governmental archives to create a detailed timeline that chronicles significant events, interventions, and policies in the Swedish management of COVID-19 between 2020 and 2021. They have created a valuable dataset for researchers working on Swedish pandemic management.

On the 9<sup>th</sup> of February 2022, Sweden's COVID-19 strategy took a new turn that literature and researchers have not covered yet. The Swedish Government and the Public Health Agency of Sweden announced to remove all existing COVID-19 restrictions, including participant limits for events and public gatherings, social distancing requirements, obligatory closing times, and the possibility to demand vaccination certificates upon entry. In addition, the Public Health Agency of Sweden has requested the reclassification of COVID-19 from a pandemic to an endemic (Regeringskansliet, 2021).

## 2. Literature Review

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This chapter will provide a comprehensive overview of nation branding, public diplomacy and pandemics as crises. Firstly, it reviews the concept of public diplomacy and soft power. Following this, the concept of nation branding and nation brand is analyzed. After that, similarities and differences between nation branding and public diplomacy are outlined for an in-depth understanding. Then, literature on nation branding and public diplomacy in crises is overviewed, and finally, the role of pandemics as crises is addressed. The chapter ends with a synthesis to provide an overview of the literature review and integrate the aspects that will be further addressed in this study.

### **2.1 Public Diplomacy and Soft Power**

Soft power is seen as an attractive power due to its ability to attract and entice (Nye, 2008). Soft power resources “are the assets that produce such attraction” (Nye, 2008, p. 95). Nye (2008) conceptualized soft power as a power of attraction. Soft power is about co-opting people rather than coercing them and getting others to want the outcomes that one intends them to want (Nye, 2008). Public diplomacy and soft power are intrinsically linked. Public diplomacy is an important instrument of soft power which governments often use to mobilize the culture, political values, and foreign policies of the country to attract publics all around the world. Soft power is enhanced when the policies are seen as legitimate in the eyes of others (Nye, 2004).

The term public diplomacy was initially developed in the mid-1960s to explain the news broadcasting activities, and exchange and cultural programs of the United States during the Cold War (Pamment, 2014). Traditionally, public diplomacy means “government communication aimed at foreign audiences to achieve changes in the ‘heart of minds’ of the people” (Szondi, 2008, p. 6). Public diplomacy is defined as “the communication of an international actor’s policies to citizens of foreign countries” (Pamment, 2013, p. 1). In contrast to traditional diplomacy, where the focus is on engagement with foreign governments, in public diplomacy, the key to managing that changing environment is engagement with public actors (Pamment, 2013). Thus, as Nye (2008) highlighted one crucial dimension of public diplomacy is relationship management, coordinating foreign and domestic actors. Nye (2008) argues that public diplomacy encompasses three important dimensions to create an attractive image of a



country, namely daily communications, strategic communication, and the development of lasting relationships with individuals. Besides selling a positive image and conveying information, public diplomacy is also about creating an enabling environment for government policies, and building long-term relationships (Nye, 2008). Accordingly, public diplomacy relies on the mobilization of strategic communication techniques and is understood as a form of political persuasion (Nye, 2008).

In recent conceptualizations, the concept of new public diplomacy emerged that relies on soft power. It also considers the role of non-state organizations and social media to generate two-way engagement with the public. It is described as inclusive, collaborative, and dialogical (Pamment, 2013). Sweden with the House of Sweden (HoS) can be seen as a great example of embodying the new public diplomacy. The House of Sweden (HoS) has been newly constructed as Sweden's flagship embassy in Washington, DC, with a glass exterior and a visitor-friendly environment to symbolize exchange and openness, representing a more transparent and open diplomacy - a new public diplomacy (Pamment, 2011).

## **2.2 Nation Branding and Nation Brand**

The British brand consultant Simon Anholt coined the concept of nation branding in the late 1990s (Castelló & Mihelj, 2018). Since then, nation branding has gained increased popularity among researchers and practitioners. However, no unified definition of the concept exists (Fan, 2006). There is an increased discussion about the difference between nation and place branding, and how the concept is related to public diplomacy. This has led to an increased need for research on this matter (Fan, 2006).

Throughout the past years, only a few practitioners and scholars have attempted to define nation branding as a distinct concept of place branding (Szondi, 2008). It is often argued that nation branding stems from the general field of marketing (Olins, 2002; O'Shaughnessy, 2000) and that the concept derives from product branding (Aronczyk, 2013). Accordingly, it is claimed that nation branding refers to branding a nation by using product promotion techniques. Fan (2006) relates the marketing theory of "Country-Of-Origin" (COO) to nation branding, stating that the product-country image is within the product brand and loses its meaning if it is separated from the product. In contrast, Anholt & Hildreth (2004) argue that the Country-Of-Origin (COO) effect is only one aspect of a more complex branding phenomenon and that countries act as brands in many ways. Place branding studies and Country-Of-Origin (COO) are mainly aimed at the economic dimensions of a county. In contrast, nation branding

addresses the economic as well as the cultural and political dimensions that have an impact on a country's image (Fan, 2010).

The academic community has extensively attempted to define nation branding. It can be understood as the commercialized external representation of a country based on the unique heritage and traits that the nation is believed to encompass in the world (Aronczyk, 2013). Nation branding aims to be visually and verbally understood by diverse audiences by creating a simple and differentiating idea built around emotional qualities (Fan, 2006). Therefore, nation branding concerns “applying branding and marketing communications techniques to promote a nation's image” (Fan, 2006, p. 6). In alignment with this definition, nation branding “is about influencing and creating positive platforms and an effective environment for a nation's brands to compete in markets” (Gudjonsson, 2005, p. 286). Its primary purpose is to increase the nation's prosperity by adding value to its brands rather than solely branding a nation *per se* (Gudjonsson, 2005). In this strand of thinking, nation branding is about strengthening or changing a nation's reputation or image (Fan, 2006; Gudjonsson, 2005).

On the other hand, nation branding can also be understood with the main purpose of promoting economic and political interests abroad and domestically, “as the strategic self-presentation of a country with the aim of creating reputational capital through economic, political and social interest promotion at home and abroad” (Szondi, 2008, p. 5).

Anholt (2007), the founding father of nation branding, sees the primary goal of nation branding in increasing competitiveness and consequently defines the concept as “the systematic process of aligning the actions, behaviors, investments, innovations and communications of a country around a clear strategy for achieving a strengthened competitive identity” (p. 22).

Kaneva (2011) differentiated nation branding approaches, into technical-economic, political, and cultural. The technical-economic approach is the strongest represented in marketing. It adopts a functionalist perspective where nation branding is perceived as a strategic tool to enhance a nation's competitive advantage in a global marketplace (Kaneva, 2011). A marketing paradigm is adopted with the central argument that the production of national images is almost similar to branding products (Kaneva, 2011).

The political approach is addressed in public relations, international relations, and international communication. Studies mainly focus on the similarities and differences between nation branding and public diplomacy conceptualizations. The similarities and differences between the two concepts will be analyzed later on. In this approach, nation branding can be understood as “the phenomenon by which governments engage in self-conscious activities aimed at producing a certain image of the nation-state” (Bolin & Ståhlberg, 2010, p. 82). The

political, and the technical-economic approach, share the instrumentalist orientation of seeing nation branding or public diplomacy as tools for gaining international competitive advantage (Kaneva, 2011).

Lastly, the cultural approach lies within media and cultural studies. This approach focuses on elaborating a critique of nation branding's practices by relating to culture, governments and national identity and by "connecting the discourse of nation branding to constructivist ideas of nationhood" (Kaneva, 2011, p. 128).

Nation branding is a powerful tool that can strengthen a country's position and help especially middle-power nations compete against powerful nations' economic and cultural supremacy (Lee & Kim, 2021). Besides that, nation branding can be a successful tool in erasing misconceptions and allowing favorable repositioning of a country concerning target audiences (Dinnie, 2016). It is proven that states that are unsuccessful in establishing relevant brand equity will fail in successfully competing politically and economically in the new world system. Without nation branding, states will not be able to attract tourists, investments, and companies (van Ham, 2002). Thus, it is argued that "a location's brand consists of the sum total of the perceptions and expectations people have about it" (van Ham, 2002, p. 264).

Consequently, nation branding is not solely about attracting tourists and gaining attention; it also includes managing loyalty, image, and identity. Anholt (2005) states that "a place brand is like the proverbial supertanker, which takes five miles to slow down and ten miles to change course" (p. 116). This visualizes that once perception is created about a nation; changing the image cannot be achieved quickly or easily.

Identity and image are critical concepts in nation branding (Dinnie, 2016). Their role and how they interact with nation branding will be further elaborated in the Theoretical Framework. Overall, it is emphasized that to create a competitive advantage internationally, a positive image and reputation are significant for nations (van Ham, 2002). This explains the constant motivation of governments to practice nation branding.

It is essential to also differentiate between the process of nation branding and a nation brand. A nation brand is an elusive term comprising different aspects and dimensions. Nation branding is about the strategies to shape the nation brand, and the active process of creating a positive brand of the country. In turn, a nation brand to the existing brand, image, reputation, or conception of a country (Fan, 2006). It is emphasized that unrelated whether conscious efforts in nation branding are present or not, a nation's 'brand' always exists, be it strong or weak (Fan, 2006). Besides that, nation brands are socially constructed and largely intangible (Berthon et al., 2011).

A technical-economic approach is taken by Dinnie (2016), who acknowledges the multifaceted nature of the nation brand by defining it as “the unique multidimensional blend of elements that provide the nation with culturally grounded differentiation and relevance for all of its target audiences” (p. 5). In addition, it is argued that to be successful, a nation brand should act as an umbrella brand targeting and appealing to many diverse audiences simultaneously (Fan, 2006). Overall, a nation brand can be described as an inherently complex and multifaceted construct (Lee & Kim, 2021).

### **2.3 Nation Branding versus Public Diplomacy**

Nation branding and public diplomacy are vast fields of research, and it has long been clear that they share a close connection (Dinnie, 2016). Nation branding and public diplomacy are similar but not identical concepts. Thus, for a more profound understanding, it is helpful to explain the similarities and the discrepancies between these two terms.

Nation branding is often seen as “the postmodern mutation of public diplomacy” (Szondi, 2008, p. 30). In previous literature, scholars have conducted cross-disciplinary reviews to identify the relationship between nation branding and public diplomacy, looking at them as separate, integrated, or similar concepts (Szondi, 2008; Gilboa, 2008). Public diplomacy and nation branding are often addressed as similar concepts. Still, they emerged from two different fields of study, with public diplomacy emerging from the field of international relations and nation branding emerging from the field of marketing and strategic communication (Szondi, 2008). Szondi (2008) claims that even though the concepts are connected due to a government’s involvement, equating the concepts of nation branding and public diplomacy is the least beneficial model as it would ignore essential differences.

It can be argued that “public diplomacy and nation branding have an inherent – albeit complicated – relationship because both practices involve international communication projects carried out by states” (Sevin & Ingenhoff, 2018, p. 3665). Dinnie (2016) argues that “the nation branding concept demonstrates considerable overlap with the concept of public diplomacy” (p. 254). In contrast, especially among marketing scholars, there is a tendency to portray public diplomacy as a subset of nation branding, with public diplomacy only involving a government’s communication policies and nation branding referring to how a nation as a whole is presented and perceived (Anholt & Hildreth, 2004).

In alignment with this, Anholt (2007), who coined the term, refers to nation branding as how a nation presents itself as a whole to other countries. In contrast, public diplomacy is focused exclusively on the representation and presentation of its government policy to different

publics. Both concepts have been criticized, nation branding due to its commercial ambition and public diplomacy for being propaganda (Szondi, 2008).

Overall, both concepts stem from the theory of soft power and create a strategic vision to focus on advancing the interest of a state internationally and managing a nation's international image (Szondi, 2008). In this sense, nation branding “forms a branch of public diplomacy and partakes in the operations of soft power”. However the difference lies “in the means used to wield the power”, which “are no longer drawn from the traditional arsenal of international diplomacy, but from strategies developed by marketing consultants” (Castelló & Mihelj, 2018, p. 560). However, public diplomacy is embedded in the political dimension, while nation branding mainly encompassed commercial aspects (Nye, 2004).

Nation branding and public diplomacy share the common goal of promoting a country's image. It can be summarized that similarities “include image and symbols management, relationship building, and extensive use of the mass media. The differences include goals or outcomes – increased sales versus foreign policy, means, types of communication, management, language, and culture” (Gilboa, 2008, p. 68).

## **2.4 Nation Branding and Public Diplomacy in Times of Crises**

As elaborated previously, the overall goal for nations is to preserve a positive image in the minds of foreign publics. However, tactics, tools, and marketing strategies will not be effective for countries that suffer from a short-term or prolonged negative image (Avraham, 2018). Negative perceptions of a destination's image often dominate and hinder a country's attempt to attract tourists (Avraham, 2018). Crises create geopolitical uncertainty, which poses challenges to international politics and emphasizes the need to normalize new diplomatic behaviour and newer public diplomacy techniques and tools (Pamment, 2020).

Avraham (2018) focuses on place branding of tourist destinations in crises. He used quantitative and qualitative content analysis to study which strategies countries use to deal with negative stereotypes and perceptions. Three strategies have been identified to improve nations' images: Audience, message, and source. Researchers can utilize this study by understanding that the use of image repair strategies can be an enrichment for the research foci of studies that deal with crises.

Other crisis-focused studies include how the Danish government intended to rebrand itself after the ‘Cartoon Crisis’. The ‘Cartoon Crisis’ has been referred to as Denmark's most significant foreign policy issue since World War II. On 30<sup>th</sup> of September 2005, the Danish newspaper Jyllands-Posten published 12 drawings of the prophet Mohammed under the

headline ‘The face of Mohammad’ (Rasmussen & Merckelsen, 2014). After this incident, Denmark suffered a significant drop among the Muslim countries. Denmark opted for nation branding as a crisis response strategy to solve the outcomes of the Cartoon Crisis.

Denmark was not the only country that faced reputation damages after a crisis. The ‘Made in China’ Crisis which started in September 2006 with the recall of pet food produced in China and the United States, is another example of a government’s image repair efforts. The incident was followed by several consumer product recalls and bans. The crisis had been a threat to China’s reputation and position as an emerging world power. Denial, bolstering, and attacking were the image repair strategies adopted by China (Peijuan et al., 2009). Not shying away from the accusations, showing the will to be engaged, and sincerity in correcting the problem facilitated China to repair its image.

Another study analyses the Norwegian and Swedish governments’ communication management during the refugee crisis from 2015 to 2016 in the context of public diplomacy and nation branding (Pamment et al., 2017). Norway and Sweden have strong traditions of trying to apply influence internationally through nation brands, public diplomacy, and soft power (Pamment et al., 2017). Regarding the refugee crisis, Sweden’s ‘brand’ was not aligned with its migration policies. However it seemed that genuine efforts were made to align the public diplomacy strategies with the current policy.

To understand how governments use information subsidies through online newsrooms for public diplomacy, Lee and Lin (2017) took a public relations perspective and studied China, Singapore and the United States. Results suggest a narrow congruence in concepts and themes among the three investigated countries. This indicates limited dialogue, engagement, and strategic collaboration (Lee & Lin, 2017).

Overall, these studies explore a crisis communication framework and focus on overcoming weaknesses or repairing reputation damages in a country’s nation brand. This shows the challenges that public diplomacy poses to nations and governments. However, this demonstrates that studies in the field of nation branding and public diplomacy in times of crises mainly focus on governments’ communication management and how they have managed their brands after crises instead investigating the perceptions and opinions of people.

### ***2.4.1 Nation Branding and Public Diplomacy in Times of Pandemics***

Over the past few decades, crises such as personal crises, effects of natural disasters and war on different countries and societies, and organizational crises have gained more attention from the media (Falkheimer & Heide, 2018). Crises are often seen as time-limited and isolated phenomena such as natural disasters, accidents, or bomb threats. However, “crises are no longer an aberrant, rare, random, or peripheral feature of today’s society; they are all built into the very fabric and fibre of modern societies” (Mitroff, 2001, p. 5). Among the crises that have had devastating negative impacts on economies, health, and national and global security are pandemic-related crises and disease outcomes (Qiu et al., 2018). Pandemics such as the COVID-19 pandemic are much more complex and will often last for months or even years, negatively impacting society, economy and health (Heide & Simonsson, 2021). Thus, pandemics are described as destructive phenomena (Bjørkdahl & Carlsen, 2018).

The COVID-19 pandemic is defined as an unprecedented global crisis that challenges the political foundations of modern states (Regeringskansliet, 2021; Boin et al., 2021). It is the first pandemic in 100 years to tremendously affect the entire world with economic, psychological, and social problems such as lockdown of non-essential industries, stress and depressive symptoms and ineffectiveness of remote education (Maison et al., 2021). This distinguishes the COVID-19 pandemic as a major health crisis from other crises such as economic crises, natural disasters, and even epidemics (Maison et al., 2021).

The COVID-19 pandemic will likely play a key role in forming public perception of nations. Two years ago, it would have been unthinkable that in 2020 countries within the European Union would close borders to their neighbours and try to boost their image by engaging in ‘government branding’ campaigns to demonstrate who can handle the crisis best (Pamment, 2020). All countries have been under global scrutiny during the COVID-19 pandemic, and those countries who succeed in their response to the virus will emerge with an improved reputation (Cull & Magnier, 2020).

A limited amount of scholars have studied the attitudes, opinions, and perceptions of people towards the COVID-19 crisis management of their own country, trust in the government and their willingness to engage with mitigation measures (Seale et al., 2020; Bengtsson & Brommesson, 2022; Nielsen & Lindvall, 2021; Ludvigsson, 2020). Similarly, only a few researchers have studied nation branding and public diplomacy in the COVID-19 pandemic. These studies will be elaborated on further below.

In contrast to previous studies, Lee and Kim (2021) have taken a new approach by studying South Korea’s pandemic public diplomacy during COVID-19 and exploring “how a

country—based on success with COVID-19—deploys public diplomacy to bolster what its government views as immediate strengths in a fast-evolving global pandemic” (p. 384). They developed a normative framework of information, trust, substance, mutual benefit, and collaboration which offers an exploratory conceptual explication of pandemic public diplomacy (PPD) (Lee & Kim, 2021). The findings suggest that in the COVID-19 pandemic, the country’s ability to manage its nation brand and to project positive influence depends on how it has reacted to the crisis (Lee & Kim, 2021). The authors came to this conclusion by looking at government communication, news media coverage and conducting a sentiment analysis (SA) of social media and international news media. Due to its successful handling of the COVID-19 pandemic, a positive nation brand could be suggested for South Korea, being perceived as a global health leader and role model (Lee & Kim, 2021).

Rookwood and Adeosun (2021) explored through the lens of nation branding and public diplomacy how Japan’s 2019 Rugby World Cup and 2020/21 Olympic Games are perceived to represent political and economic challenges during the COVID-19 pandemic. Their findings show that financial investments are essential features, as well as how a host nation engages in nation branding and public diplomacy. This might affect the extent to which these sports events are perceived as profitable and successful (Rookwood & Adeosun, 2021). In addition, their study also highlights the relevance of social media platforms in shaping public perception of people who consume Sports Mega-Events (Rookwood & Adeosun, 2021).

As discussed previously, several studies have addressed public diplomacy and nation branding in times of crises or conflict. Still, only a few scholars have studied nation branding and public diplomacy in the context of a pandemic, especially with a focus on public opinion and perception. There is a gap in the nation branding and public diplomacy literature, which has yet to focus on COVID-19 (Lee & Kim, 2021). Additionally, there is a lack of academic research on international opinions about a country during the COVID-19 pandemic and the link to its nation brands. Hence, this study does not only aim to contribute to this field of research by filling a gap but even more by problematizing the notion of nation brand image perception in the context of pandemics by measuring public opinions as sentiments.



## **2.5 Synthesis**

The literature review on nation branding and public diplomacy in the context of crises demonstrated that, on the one hand, there is limited research on these fields in the context of pandemics. On the other hand, there is no academic research on the international audiences' opinions about Sweden during the COVID-19 pandemic. This emphasizes the need for more research to expand the understanding of the phenomenon of nation brand image perception in the context of pandemics. Various conceptualizations within nation branding and public diplomacy were identified to broaden the knowledge of this phenomenon. The literature review identified that a nation brand consists of people's expectations and perceptions about it and is therefore socially constructed. Consequently, a positive nation brand image is significant for attracting tourists and gaining a competitive advantage. However, how nations strategically handled the COVID-19 pandemic might affect people's perception of a nation.

Following the findings in the literature, this thesis aims to illuminate the nation branding and public diplomacy research in the context of pandemics by exploring the international audiences' opinions about Sweden during the COVID-19 pandemic and place the study within the field of strategic communication.

## 3. Theoretical Framework

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This section presents the theoretical framework of this thesis. It introduces crucial concepts within the theory of nation branding, and the definitions used for this research. Firstly, it outlines definitions of the concepts of nation branding and public diplomacy, which guide this research. After that, the concepts of nation brand identity and nation brand image are portrayed, focusing mainly on the concept of nation brand image. Finally, it is aimed to elaborate on the theoretical understanding of nation branding by drawing from brand equity theory to understand its implications for a nation brand image.

### 3.1 Concept Nation Branding versus Concept Public Diplomacy

The literature review outlined different definitions and purposes of nation branding, such as increasing a nation's competitiveness (Anholt, 2007), promoting political and economic interests abroad and domestically (Szondi, 2008), and strengthening or changing a nation's reputation and image (Fan, 2006; Gudjonsson, 2005).

This study adopts a technical-economic and political approach to nation branding, seeing it as a tool for gaining international competitive advantage (Kaneva, 2011). In this study, nation branding is understood based on Anholt's definition (2007) as *"the systematic process of aligning the actions, behaviours, investments, innovations and communications of a country around a clear strategy for achieving a strengthened competitive identity"* (p. 22). Accordingly, nation branding is about creating a sustainable differential advantage and communicating with diverse target groups in practical ways to generate positive perceptions. It can be seen as an active process in which nations aim to create a favorable image of themselves to be projected to an internal and external audience. Consequently, this study positions nation branding as an activity that involves the management of how international audiences perceive country images with a focus on international perceptions (Pamment, 2011). The concept of a nation brand is understood accordingly to Dinnie's (2016) definition as *"the unique multidimensional blend of elements that provide the nation with culturally grounded differentiation and relevance for all of its target audiences"* (p. 5). This definition takes into account the multidimensional nature of nation brands. The nation brand in this study is also understood as the existing image, brand, or conception of a country (Fan, 2006).

In contrast, public diplomacy in this study is understood as an overarching term that illuminates the engagement with foreign society through policy communications, relationship management, and cultural relations rather than only image-related messages (Melissen, 2007).

Nation branding and public diplomacy are comprehended as distinct but overlapping concepts. Public diplomacy relies more on behavior, while nation branding is seen as a more holistic approach that relies on symbolism. However, both concepts are justified by an implicit sense of soft power and share the common grounds and goals of creating a positive image, building effective relationships and relying on the expected efficacy of persuasion as the central tool for policy outcomes (Dinnie, 2016).

### **3.2 Nation Brand Identity and Image**

Identity is a multifaceted concept and is understood as what something truly is (Dinnie, 2016). The notions of brand identity and brand image have flourished in the context of products rather than nations. Nevertheless, the core concepts can be applied to the research field of nation branding (Dinnie, 2016). Brand vision, brand positioning, brand personality, and brand scope are essential factors for developing a nation brand identity. Identity and image are distinct but related concepts, as brand identity originates from the company, while the brand image in contrast, refers to the perceptions of consumers (Dinnie, 2016). Dinnie (2016) discusses an identity-image gap, meaning that a vast amount of nation's struggle that external audiences do not perceive them for what they truly are and stand for.

Image refers to how something is perceived and is defined as “the impact that generalizations and perceptions about a country have on a person's evaluation of the country's products and/or brands” (Jaffe & Nebenzahl, 2001, as cited in Dinnie, 2016, p. 39). How an image of a country is formed is dependent on several inputs, such as political events; television or other media; how the country is portrayed in film; performance of national sporting teams; the behavior of individuals associated within a certain country; and the quality of brands originating from the country (Dinnie, 2016). A country image is understood as the sum of beliefs and impressions people hold about places. Images represent a simplification of many associations and pieces of information connected with a place. They are a product of the mind “trying to process and pick out essential information from huge amounts of data about a place” (Kotler & Gertner, 2002, p. 251). Nation brands have to understand their existing nation brand images by segmenting different audiences to develop targeted communications to reinforce positive perceptions and limit negative perceptions (Dinnie, 2016).

In the context of nation branding, the qualitative personification research technique is highlighted as a tool to gain insight into how a nation's image is related to its head of state or political leader. This research technique invites consumers and non-consumers to treat the brand as if it were a person. It allows gaining insight into the mental associations that consumers hold regarding a brand (Dinnie, 2016).

Overall, little is known about disseminating a nation brand image to develop a consensual perception of the nation brand (Torelli, 2021). However, the sphere of a country image is assumed to be of great importance in today's globalized economy emphasizing this study's importance (Dinnie, 2016).

### **3.3 Nation Brand Equity (NBEQ)**

Countries, just like brands, have equity associated with them. Brand equity is described as the perception consumers have about a brand (Chernatony & McDonald, 2013). The term brand equity originally stems from the practice and theory of branding and refers to the value of a brand (Dinnie, 2016). In recent years, classical consumer-based brand equity theories, such as customer-based brand equity theory, have been adapted to nation branding research, viewing a nation brand as an asset (Keller, 1993).

According to the customer-based brand equity theory nation brand equity (NBEQ) is understood as the "differential effect that nation brand knowledge has on different stakeholders' response to marketing of any entities from that particular nation" (He et al., 2021, p. 26). Overall, nation brand equity (NBEQ) is defined as goodwill or equity associated with a country (Yi Chen et al., 2015). The association may be either positive or negative as a function of religion, culture, economic development, or politics (Yi Chen et al., 2015).

However, the topic of nation brand equity (NBEQ) and the value of nation brands remains scarce in literature as the nation is a (relatively new) entity that is being branded (Steenkamp, 2021). To fill this void, Dinnie (2016) contributes to the field of nation branding with his asset-based nation brand equity (NBEQ) model, arguing that the concept of brand equity can be applied to nation brands. Consequently, this study intends to use this conceptualization to understand nation brand equity (NBEQ) further.

According to Dinnie (2016), nation brand equity (NBEQ) is "the tangible and intangible, internal and external assets (or liabilities) of the nation" (p. 67). The internal and external assets (or liabilities) form the sources of nation brand equity (NBEQ). External assets are conceptualized as disseminated (the diaspora, branded exports, and brand ambassadors) or as vicarious (external portrayal in popular culture and country image perceptions). Internal assets,

in contrast are conceptualized as nurtured (support for the arts and internal buy-in) or innate (landscape, culture, and iconography) (Figure 1). All these sources contribute to nation brand equity (NBEQ). The focus of this study is on external assets; thus a closer look will be taken at how vicarious assets constitute nation brand equity (NBEQ).

Country image perception is an important external asset contributing to a nation’s brand equity (NBEQ) and is also relevant for this study. It is significant to constantly monitor and evaluate existing country image perceptions to manage these successfully. Therefore, positive perceptions can be a severe liability and powerful asset (Dinnie, 2016). On the other hand, negative perceptions can damage the overall nation brand equity (NBEQ). If this happens, a strategy needs to be developed and implemented to ensure that the nation brand equity (NBEQ) will not be weakened over a long period.

Teodorović and Popesku (2016) are some of the few scholars who used an extended version of Dinnie’s nation brand equity (NBEQ) model incorporating elements of sustainability to prove a strong positive relationship between the nation brand image of a country and the elements of sustainability associated with it. Using secondary global country data obtained from several global database sources, their study strengthened the position that image is a significant component of the nation brand equity (NBEQ) model, followed by sustainability and loyalty (Teodorović & Popesku, 2016).

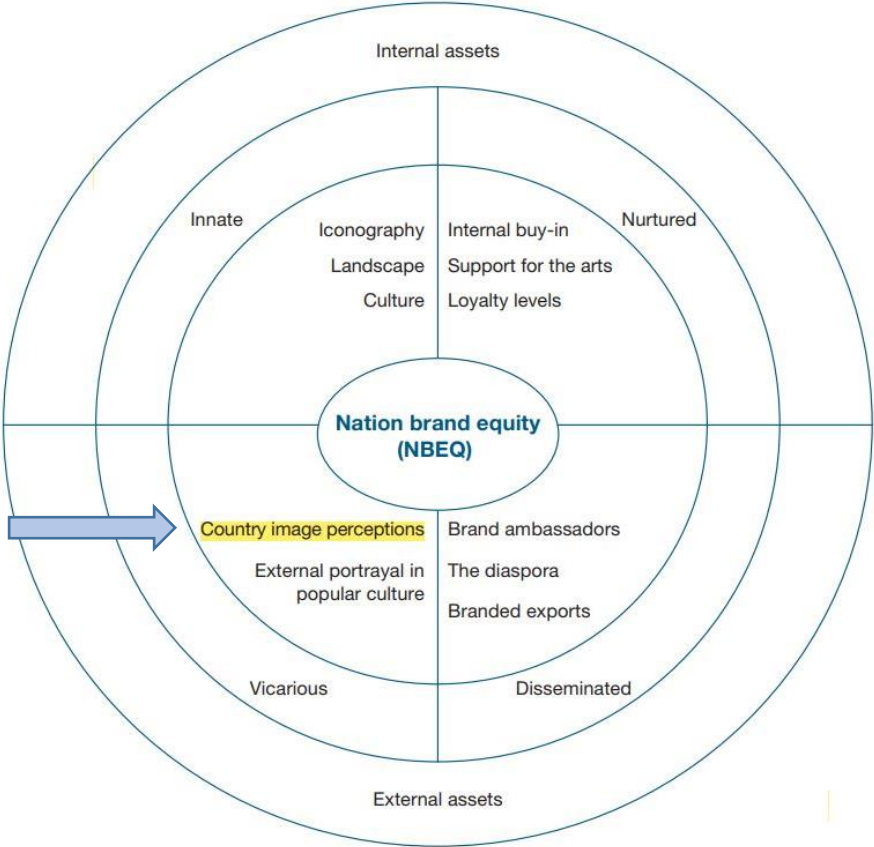


Figure 1. Model of Asset-Based Nation Brand Equity (NBEQ) (Dinnie, 2016, p. 68).

## 4. Methodology and Research Design

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This chapter explains the mixed-methods research design chosen for this study. It departs from the pragmatic tradition to explore the opinions about Sweden during the COVID-19 pandemic and its implications for its nation brand. In this instance, sentiment analysis (SA) as a mixed-methods approach is taken as the research method for this particular study (see Figure 2 for a comprehensive overview). The description of the mixed-methods research study follows, including why Twitter has been selected as a relevant social media platform. After that, data extraction through text mining is explained, followed by the elaboration of data cleaning, coding, and sentiment analysis (SA). This chapter concludes with ethical considerations and limitations that have been raised throughout the research process of this study.

### 4.1 Pragmatism

Historically, pragmatism developed in the late 19<sup>th</sup> and early 20<sup>th</sup> century “as a philosophical movement that focused on the practical consequences of social reality”, with the philosophers Charles Peirce, William James, and John Dewey as ‘classical pragmatists’ (Kelly & Cordeiro, 2020, p. 2). This study adopts a mixed-methods research design, meaning combining quantitative and qualitative data elements. Consequently, this study is guided by a pragmatic paradigm.

Pragmatism as a paradigm “is based upon the premise of utilizing the best methods to investigate real-world problems, allowing for the use of multiple sources of data and knowledge to answer research questions” (Allemang et al., 2021, p. 39). This also leads to the appropriateness of using mixed-methods research to address problems most properly, as methodologies are seen as tools that help understand the world (Allemang et al., 2021). This tradition claims that human experience is the primary means for generating knowledge and understanding the world rather than relying on absolute truths (Allemang et al., 2021). Pragmatism’s mainly focuses on addressing real-world problems, as defined by the communities within which these occur (Allemang et al., 2021). Thus, knowledge is viewed as being constructed and is based on the reality of the world people experience and live in (Johnson & Onwuegbuzie, 2004).

Following these, it is argued that pragmatism is a relevant paradigm for this thesis. In particular, because this thesis explores the opinions of international audiences about Sweden during the ongoing COVID-19 pandemic by following a mixed-methods approach. In addition, the methodological openness of the pragmatic approach, in which methods from other fields of science can be used, makes the paradigm best suited for this study. Therefore, the pragmatic lens allows one to better understand the research problem under investigation from the views of people who live the experiences while using the method best suited to the research problem.

## **4.2 Mixed-Methods Research Study in the Form of Sentiment Analysis (SA)**

Social networks are an established environment in which users share emotions and opinions daily. Consequently, they have developed into an essential source of big data related to the opinion and sentiment sphere (Zucco et al., 2019). Social media networks contain a large amount of data. Hence, text mining technologies are becoming increasingly relevant for social science research to extract this large volume of user-generated data (Ampofo et al., 2015). As the volume of opinionated text increases, it becomes more difficult to monitor opinions on social network platforms without using an automated aid.

Thus, in this study, a sentiment analysis (SA) as a mixed-method approach will be adopted to examine the opinions of international audiences in the form of sentiments about Sweden during the COVID-19 pandemic. The aim of sentiment analysis (SA), often also referred to as ‘opinion mining’ or ‘text analytics’, is to extract emotions, opinions, and sentiments from texts which are made available by different data sources, just like social networks (Zucco et al., 2019). Sentiment analysis (SA) “plays a huge role to understand people perception and helps in decision making” (Drus & Khalid, 2019, p. 713).

A sentiment analysis (SA) is defined as a computer process developed to detect and categorize consumers’ opinions online to determine their sentiment towards a particular topic (Lappeman et al., 2020), Sweden and COVID-19 in this case. A major advantage of sentiment analysis (SA) “is that it collects and analyses online comments in real-time” which is especially important for researchers given the vast amount of user-generated content on social media platforms (Rambocas & Pacheco, 2018, p. 147). Another advantage of this approach is that it allows to process quickly and extract large amounts of data that reflect interactions, preferences, and behaviors of real users that engage online by sharing commenting and publishing content through social media (Battiato et al., 2016).

Sentiment analysis (SA) collects the type of data that is typical of qualitative research, such as thoughts, feelings, opinions and sentiments; on the other hand, it reduces subjectivity and employs machine learning techniques that are characteristic of quantitative methods (Rambocas, 2013). A sentiment analysis (SA) qualitatively utilizes data allowing a researcher to further explore a text by extracting meaning or sentiment. Thus, it can be understood as a computer-assisted qualitative data analysis (Ceron et al., 2014).

The most appropriate response to big data to explain social behavior is combining methods into a broader methodology, namely combining qualitative with quantitative methods to create new forms of knowledge about the social world (Ampofo et al., 2015). Consequently, the methodology for this study depends on a combination of automated and human analysis of social media content. Qualitative human analysis includes deciding the key search terms, choosing variables to add to the VADER Lexicon (Valence Aware Dictionary for Sentiment Reasoning), testing the sentiment analysis (SA) as an approximation paradigm, and interpreting findings. Quantitative automated analysis with the help of technology involves the initial data search and classification and processing of the data using the Sentiment Intensity Analyzer (SID) of the Natural Language Toolkit (NLTK). Human and automated analysis combined includes visualization tools to portray key findings more quickly and comprehensible (Ampofo et al., 2015).

#### ***4.2.1 Twitter as a Social Media Platform***

Twitter, with 192 million global monetizable daily active users in the 4<sup>th</sup> quarter of 2020, will be used as social media platform for this study (Twitter, 2020). Twitter has become an important platform for interacting with citizens and other officials and promoting policies (Boon-Itt & Skunkan, 2020). Thus, it has become a highly relevant tool in international and domestic politics and to this effect, has been selected as a representative social media platform for this study. Data from Twitter are useful, rich, available and accessible. People express their views and feelings freely on any topic or issue, especially during times of uncertainties such as natural disasters or disease outbreaks (Boon-Itt & Skunkan, 2020).

This was also the case during the COVID-19 pandemic. Social media played a significant role by connecting people virtually during this pandemic and in communicating the spread of the disease (Kandasamy et al., 2021). Twitter is a good communication channel for understanding both public awareness and public concern about COVID-19 (Boon-Itt & Skunkan, 2020).



Another main advantage of using Twitter is that users are organized in networks and it focuses on keywords which provides an excellent opportunity to study the shared content.

Lastly, the interactions among Twitter users are based on the subject matter and mentioning or retweeting other users is possible even without an established follower-following relationship which allows posting to a wider audience (Bhatnagar & Choubey, 2021). This is a great advantage contrary to Facebook, where users have to establish a ‘friend status’ or like an organizational page before engaging with each other (Sevin & Ingenhoff, 2018).

### **4.3 Data Extraction**

For this study, empirical data were obtained from English tweets through text mining by using the web scraping tool Twint. English tweets were extracted to be able to focus on international audiences as well as to conduct a human validation of the tweets. Text mining describes either a single or a collection of processes in which software tools are used to engage in “the discovery by computer of new, previously unknown, information by automatically extracting information from different written resources” (Fan et al., 2006, p. 78). This study uses text mining to extract useful information from tweets (unstructured data). Data extraction refers to retrieving data from data sources, in this case, Twitter, for further data processing or storage (Baird, 2019).

Data extraction was performed using the advanced web scraping tool Twint, a GitHub tool written in Python (Appendix 1). Twint is used because it does not use Twitter’s official API, which only allows accessing data seven days back in time (GitHub, 2022). Hence, Twitter is fairly restrictive and limited in terms of volume and pace of data collection (Caren, 2020). However, for this study, it was important to extract tweets that go further back than only a time frame of seven days to analyze the full time span of the COVID-19 pandemic.

Social media data were extracted from the 27<sup>th</sup> of January 2020 until the 19<sup>th</sup> of February 2022. This first date, the 27<sup>th</sup> of January 2020, was chosen as it marks the date when the WHO and the European Centre for Disease Prevention and Control (ECDC) asked countries to complete a WHO standard COVID-19 case report form for all probable and confirmed COVID-19 cases (Spiteri et al., 2020). Shortly after, on the 31<sup>st</sup> of January 2020, Sweden confirmed the first COVID-19 case (Krisinformation, 2020). On the 9<sup>th</sup> of February 2022, most COVID-19 restrictions were removed based on the assessment of the Government and Public Health Agency of Sweden (Government Offices of Sweden, 2022). The 19<sup>th</sup> of February 2022 marks the date the data was collected. It includes the first few days after the restrictions were removed in Sweden and, therefore, discussions about the removal of the restrictions. Accordingly, this

time frame allows analyzing public opinion about Sweden from the beginning of the COVID-19 pandemic until the lifting of the restrictions.

Only data from publicly available Twitter profiles were captured. Data collection was based on a set of frameworks to extract tweets associated with the COVID-19 pandemic in Sweden. Tweets were extracted either with or without hashtags and needed to include the term 'Sweden' and either one of the terms 'Covid' or 'Corona'. Consequently, tweets that contained the terms 'Covid-19' or 'Coronavirus' in connection with 'Sweden' were also scraped (Appendix 1). Thus, a topic-based sampling technique of tweets was employed, retaining the relevant keywords by active Twitter users during the selected timeframe.

Through this process, 232.614 tweets were retrieved. The tweets came from a randomly selected group of individuals who have publicly posted on social media. It must be noted that sampling techniques of large-scale datasets, such as Twitter, differentiate themselves from traditional media, as the volume of social media content can fluctuate immensely (Kim et al., 2018).

#### **4.4 Data Cleaning, Coding and Analysis**

Text analysis techniques, including sentiment analysis (SA) and word clouds, are applied to the collection of tweets from Twitter as a representative of social media.

To analyze the extracted data, the data first needed to be cleaned. Thus, from the 232.614 produced social media posts during the determined time frame, the following were excluded by using Excel: Tweet duplications and tweets in other languages than English. This permitted to focus solely on messages produced in English by Twitter users about the COVID-19 pandemic in Sweden. In addition, # signs, @ signs, and https:// links were removed by using Python to enable the Sentiment Intensity Analyzer (SID) and VADER Lexicon to perform the sentiment analysis (SA). After the data cleaning process, the initial data set was reduced to 195.745 tweets. In total, 36.869 tweets were eliminated after data cleaning.

After that, the 195.745 tweets were coded in Python programming language to conduct a sentiment analysis (SA), a Natural Language Processing (NLP) approach to categorize the sentiments that appeared in the Twitter messages (Appendix 2). The text data were put into data frames utilizing Pandas packages in Python. Pandas data frame "is a 2-dimensional labelled data structure with columns of potentially different types" (Pandas, 2022, para. 28). Thus, it is the equivalent of an Excel spreadsheet. Pandas package is an open-source library that offers data analysis tools and data structures for Python (Raghupathi et al., 2020).

To conduct the sentiment analysis (SA), the Sentiment Intensity Analyzer (SID) was deployed, which is based on Natural Language Toolkit's (NLTK) VADER Lexicon. The Natural Language Toolkit (NLTK) is a suite of programs and libraries for Natural Language Processing (NLP) written in the Python programming language (Raghupathi et al., 2020). VADER is a rule-based and lexicon sentiment analysis tool which is specifically attuned to sentiments expressed in social media. "Lexicons are special dictionaries that contain a list of terms and their negative or positive polarities provided by a scoring system" (Roy & Rambo-Hernandez, 2021, p. 561). Two approaches dominate a sentiment analysis (SA), either a lexicon approach or machine learning algorithms that can be applied to scale and measure the contents within each post (Lappeman et al., 2020). As elaborated before, in this thesis, a rule-based lexicon approach was applied to determine each tweet's polarity. More specifically, a dictionary-based approach which uses a predefined dictionary of words where each word is associated with a specific sentiment.

VADER contains around 7.500 sentiment features in total; words not listed in the dictionary were scored as neutral (Ma, 2020). Those sentiments were developed by special coders that rated all lexical according to their polarity and intensity on a scale from -4 as extremely negative to +4 as extremely positive (Ma, 2020). The Sentiment Intensity Analyzer (SID) categorizes the text in each post as either positive, negative, or neutral. Each word will have a sentiment rating; for example, a positive word (e.g., 'good') will have a positive sentiment rating of 1.9. 'Great' will have a higher rating than 'good' with a positive sentiment rating of 3.1. The same applies to words that convey negative sentiment (e.g., 'horrible') will have a negative sentiment rating of -2.5. VADER also contains phrases (e.g., 'the bomb'), sentiment-laden acronyms (e.g., 'LOL'), and emoticons (e.g., '☺') (Ma, 2020).

To indicate the intensity of each sentiment, a compound score is provided by the Sentiment Intensity Analyzer (SID). Compound is a combined version of the first three scores (positive, negative, or neutral) (Yalçın, 2020). The sentiment ratings are summed up and normalized between -1 (extremely negative) and +1 (extremely positive) (Raghupathi et al., 2020). Consequently, a 0 in the compound score is a neutral sentiment and everything above 0 is a positive sentiment and below 0 a negative sentiment.

Since there is no limit to the number of decimal places in the compound score, hundreds of categories are formed, complicating a clear representation of the data. Therefore, to visualize the results better with only one negative and one positive category, the assigned compound scores needed to be converted into only two categories. Every sentiment with a compound score lower than 0 (after testing, this number was adapted to -0.25) was categorized to the negative

category, and every sentiment with a compound score of more than 0 (after testing, this number was adapted to 0.25) was assigned to the positive category. Other tweets were identified as neutral. As this study only focuses on negative and positive sentiments, neutral sentiments were excluded from the analysis.

Before running the sentiment analysis (SA), carefully selected variables were added to the VADER Lexicon. A sample of 1500 tweets from the year 2020 and a sample of 1500 tweets from the year 2021 of the total of 195.745 tweets were randomly reviewed to search for common patterns and hashtags. This step aimed to guarantee the accuracy of the VADER Lexicon by ensuring that these words were detected correctly and to avoid the risk of the dictionary used to train the Sentiment Intensity Analyzer (SID) not containing these words. The following keywords were identified and added to the model: ‘Swedenwasright’ and ‘nomorelockdowns’ were categorized as positive scores and ‘elderpurge’, ‘senicide’, ‘genocide’, ‘sparkategnell’ (English translation: Kicktegnell. Tegnell refers to Anders Tegnell, Sweden’s epidemiologist, from 2013 until 2022), ‘hubris’, and ‘wearamask’ were categorized as negative scores. After adding the variables, the sentiment analysis (SA) was run.

Finally, the data was visualized by using Plotly (Appendix 3), an open source-library that provides charts and tools to create a dashboard for Python language (Plotly, 2022) and Matplotlib (Appendix 4), a comprehensive library for creating animated, static, and interactive visualizations in Python (Matplotlib, 2022). Negative and positive sentiments about Sweden during COVID-19 were portrayed in a graph, and word clouds were created to visualize the most frequent topics that showed negative and positive sentiments.

#### ***4.4.1 Testing the Sentiment Analysis (SA) as an Approximation Paradigm***

It must be taken into account that sentiment analysis (SA) is not without limitations. The limitations are highlighted at the end of this chapter. Sentiment analysis (SA) is an approach measuring social media sentiment as a whole, where sentiment can work as a proxy for capturing users’ opinions. However, sentiment analysis (SA) needed to be tested to ensure if sentiment works as a proxy for capturing public opinion. Thus, after conducting the sentiment analysis (SA), 100 out of the total of 195.745 tweets were randomly selected using the random number generator of GraphPad and manually analyzed (Appendix 5).

The deployment of human validation was critical in this study as the emotive and complex nature of conversations are less easily identified in analyses by algorithm-based systems (Lappeman et al., 2020). Testing the sentiment analysis (SA) as an approximation paradigm ensured that data were correctly categorized and that the meaning and nuances behind

a significant number of posts were discovered. Lastly, the margin of error was calculated to conclude if the proxy portrays the data reliably and validly.

The following illustration presents an overview and visualizes the deployment of the sentiment analysis (SA) comprehensively.

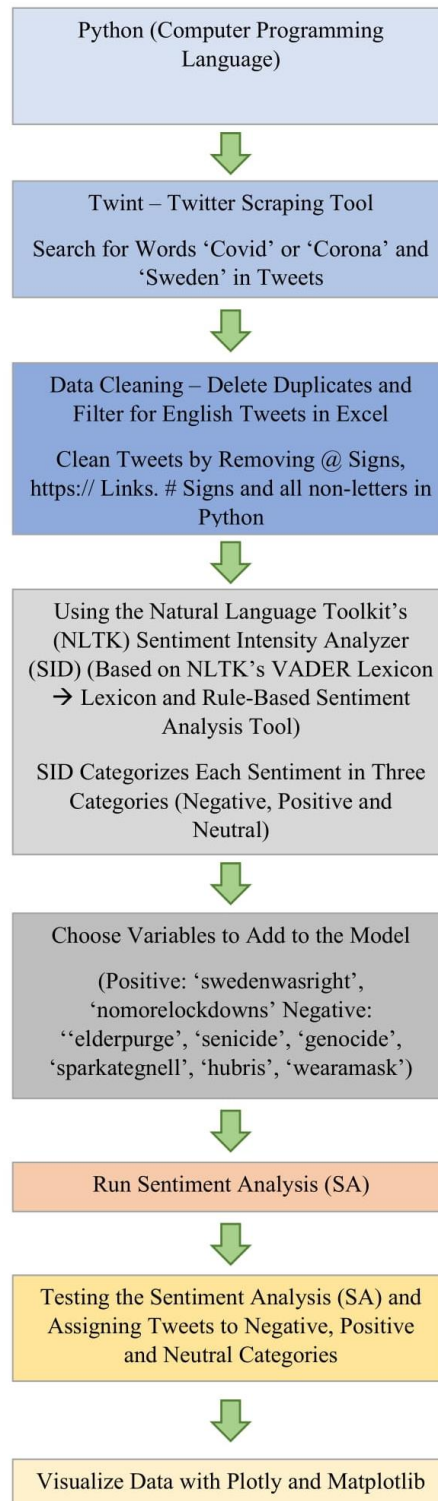


Figure 2. Visualization of Sentiment Analysis (SA).

## 4.5 Ethical Considerations

Given the use of social media research in this study, ethical considerations were taken with significant care throughout all stages of the research process. Twint was used as an advanced web scraping tool for Twitter to retrieve the tweets for this study. Twint does not disclose personal data, only publicly available data. All public Twitter is available through its standard web interface; Twint merely takes advantage of this by collecting data from Twitter without using its official API (Caren, 2020). Social media platforms, such as Facebook inherit complex privacy settings that must be considered regarding research ethics. In contrast, “publicly visible Twitter messages are guaranteed to have been published to the Internet at large, at least technically, and archiving them in the course of research activities is therefore substantially less problematic” (Bruns et al., 2012, p. 13).

Even though tweets are publicly made visible to the internet at large; ethical consideration must be taken. As an academic researcher, ethical guidelines for online research should be followed. Thus, it must be ensured to preserve the rights of privacy, confidentiality, anonymity, consent, voluntary participation and protection from harm. Ensuring participants’ privacy and maintaining the confidentiality of the data collected is essential (Rambocas & Pacheco, 2017). This study used publicly available tweets; however, there is a growing debate concerning the privacy expectations of Twitter users, as they might be unaware of “the fully public nature of their activity or its possible harvesting by researchers” (Zimmer & Proferes, 2014, p. 258). Nevertheless, this debate remains mainly unresolved (Zimmer & Proferes, 2014).

In this study, participants were ensured fullest anonymity by ensuring that their names were not portrayed. Collected data was stored on the researcher’s private laptop in a separate folder named ‘Master Thesis Strategic Communication’ throughout the research process. All the data will be permanently deleted on the 3<sup>rd</sup> of June 2022 with the finalization of this study.

As a researcher conducting online research, I have the duty to maintain the highest ethical standards throughout the research process. Information needs to be collected with caution and confidentiality, participants’ privacy needs to be safeguarded wherever possible, and they need to be protected from harm (Rambocas & Pacheco, 2017). I hope that the integrity of this study was ensured and that the results were not affected by taking the following ethical considerations into account.

## 4.6 Limitations of Sentiment Analysis (SA)

Sentiment analysis (SA) is a great tool to truly understand people's opinions, feelings and experiences on social media. However, a sentiment analysis (SA) has also several limitations due to the characteristics of the posted tweets and the ambiguity of natural language. These limitations are taken into consideration in the following.

One shortcoming that needs to be reflected on is that subjective opinions and feelings expressed towards a specific topic on social media represent only a fraction of the information of interest. In alignment, sentiment analysis (SA) is an approach to measuring social media sentiment as a whole, where sentiment can work as a proxy for capturing users' opinions. Consequently, sentiment analysis (SA) is only a snapshot in time as public sentiment is unsteady and may change. Findings are limited to users of Twitter, as not everyone in the population is using Twitter.

Twitter is an excellent platform as it allows to create dynamic conversations by retweeting and engaging dialogue. However, it may be worth noticing that this might lead to the creation of isolated conversations between users which are loaded with negative or positive sentiments, which might not be of direct relevance to the aim of this study.

Besides, it is challenging to capture the essential meaning of a tweet in a machine-understandable format. The language on the internet is characterized by abbreviations, poor grammar and a lack of capitals which might cause problems for the sentiment algorithms (van den Broek-Altenburg & Atherly, 2019). This indicates that analyzing sentiment without context is difficult. However, machines cannot learn about contexts if they are not mentioned explicitly, as they do not take into account how words are combined in a sequence. This can lead to a change in polarity and, wrong sentiment identification.

Another note of caution should be sounded because of sarcasm, irony, and emoticons often used on social media platforms. People often use positive words to express these forms of speech, making it difficult for algorithms to detect. This often leads to the wrong classification of positive, negative and neutral sentiment. This highlights again the importance of combining automated and human analysis to ensure the accuracy of the analysis. Conducting a sentiment analysis (SA) poses the risk that some terms may be mislabeled. Not each tweet has been humanely assessed in context, and the algorithms only used existing lexicons to assess the underlying sentiments associated with the data set (Roy & Rambo-Hernandez, 2021). For instance, "Holy crap! This was amazing" might be detected as false negative as the word 'crap' has a negative connotation; however, it is used positively in the overall context. These

limitations need to be considered as they pose the risk of skewing the results. However, human validation of 100 tweets was deployed in this study to mitigate these limitations.

Even though rule-based approaches have improved tremendously throughout the past years, it is reinforced that data scientists need to advance in creating more accurate sentiment classifiers.

Lastly, there are also limitations regarding the techniques used to collect the data. Data has been collected based on keywords. Some relevant tweets might be missing if they did not contain these keywords. Besides, sentiments were not distinguished between light or strong positive and negative. This facilitated the analysis and allowed focusing only on strong sentiments but might have led to an overgeneralization of the results.



## 5. Empirical Results

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This chapter presents the empirical findings of this study. They have been obtained from a comprehensive evaluation containing a dataset extracted from open-source data accessible from Twitter by using the keywords ‘Covid’ and ‘Sweden’ or ‘Corona’ and ‘Sweden’. Time-series graphs in the form of line plots were created to visualize the sentiment polarity score from the 27<sup>th</sup> of January 2020 until the 19<sup>th</sup> of February 2022. Results are divided into three sections. Firstly, they describe the dataset’s frequency of negative, neutral and positive sentiment. Secondly, a line plot of the negative and positive sentiment of the whole dataset is shown. Thirdly, a closer look is taken into the four different ‘waves’ of the COVID-19 pandemic in the form of line plots of negative and positive sentiment of each of the four ‘waves’. In addition, striking negative and positive sentiments are looked closer into by displaying the most frequent used words by Twitter users in the form of word clouds.

The first research question of this study aims to examine: *How do international audiences discuss Sweden during COVID-19 on Twitter?* The following will portray the empirical findings to answer the first research question.

### **Negative, Neutral and Positive Sentiment Distribution of the Whole Dataset**

Figure 3 displays the total number of tweets divided into the three categories of negative, neutral and positive according to their sentiment values. Of the 195.745 tweets in this dataset, 68.407 (34.95%) are classified as negative sentiment tweets, 75.472 (38.56%) as neutral sentiment tweets, and 51.866 (26.49%) are of positive sentiment. Most tweets in this dataset express negative or neutral opinions about Sweden during COVID-19. As elaborated before, only negative and positive sentiments are used in this analysis. The number of negative tweets is 31.89 % higher than of positive tweets. However, it is striking that neutral opinions are the highest among all categories.

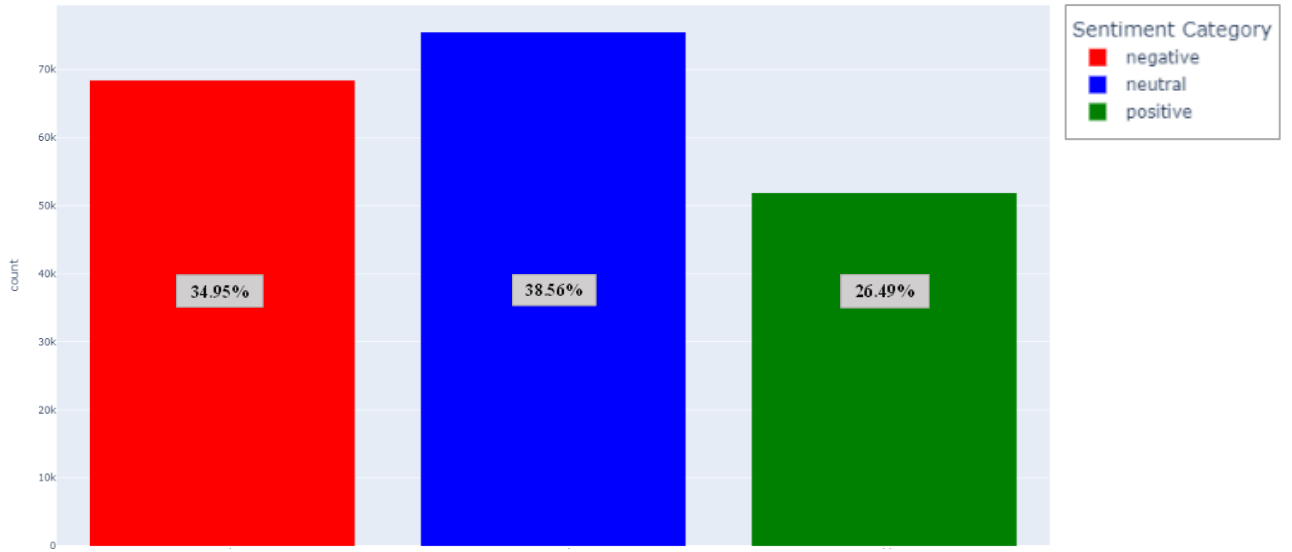


Figure 3. Frequency of Categorized Sentiments.

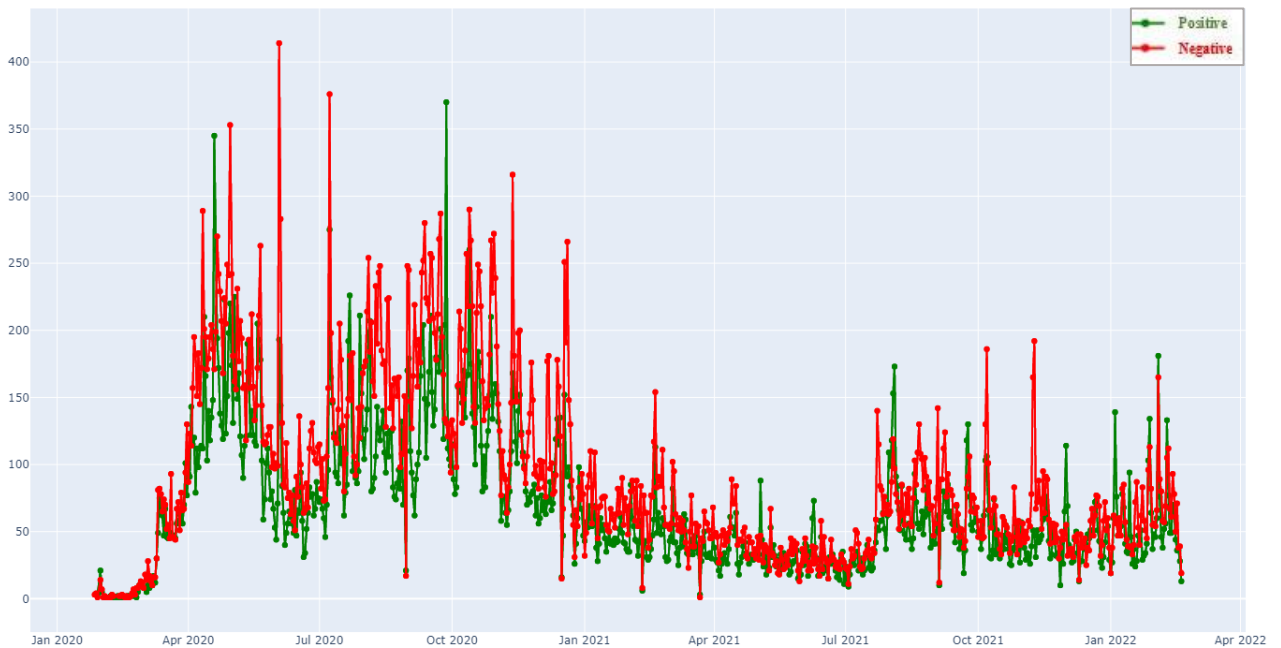


Figure 4. Line Plot of Overall Negative and Positive Sentiment Over Time.

### Line Plot of Negative and Positive Sentiment of the Whole Dataset

The line plot above (Figure 4) shows the overall negative and positive sentiment from the 27<sup>th</sup> of January 2020 until the 19<sup>th</sup> of February 2022. The color red stands for negative sentiment and green for positive sentiment. It is visualized that there is a random variation with no clear patterns or cycles. However, peaks (surges of positive sentiment) and valleys (surges of negative sentiment) can be observed. A closer inspection of the graph shows that negative sentiment is more prevalent than positive sentiment. It is apparent from this line plot that the

highest negative sentiment is on the 3<sup>rd</sup> of June 2020. Additionally, it can be seen that there is a sudden shift to more positive sentiment from September 2021 on, containing only positive outliers after December 2021. The word cloud in Figure 5 visualizes the words most frequently found in the corpus of tweets with a negative sentiment. It is shown that words like ‘corona’, ‘death’, ‘emergency’, ‘dying’, ‘global’, and ‘news’ stand out in this data set. In contrast, Figure 6 illustrates the words most frequently found in the corpus of tweets with a positive sentiment. Words like ‘corona’, ‘virus’, ‘wanderer’, ‘defense’, ‘live’, ‘free’, ‘people’, and ‘improvement’ are catching the eye of the observer in this data set.

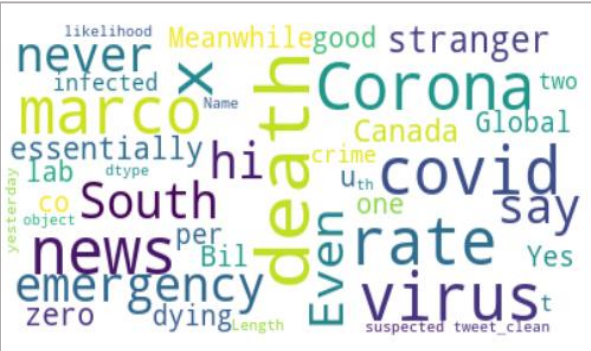


Figure 5. Word Cloud of Negative Sentiment of the Whole Dataset.



Figure 6. Word Cloud of Positive Sentiment of the Whole Dataset.

After looking at the negative and positive sentiment of the whole dataset, a closer look is taken into the different ‘waves’ to identify striking peaks, valleys and shifts in the following.

The second research question is set out to answer: *Have international audiences' opinions about Sweden changed during the four 'waves' of the COVID-19 pandemic on Twitter? If so, how?* In the following, the empirical findings to answer the second research question are displayed.

### Line Plot of Negative and Positive Sentiment of the First COVID-19 'Wave'

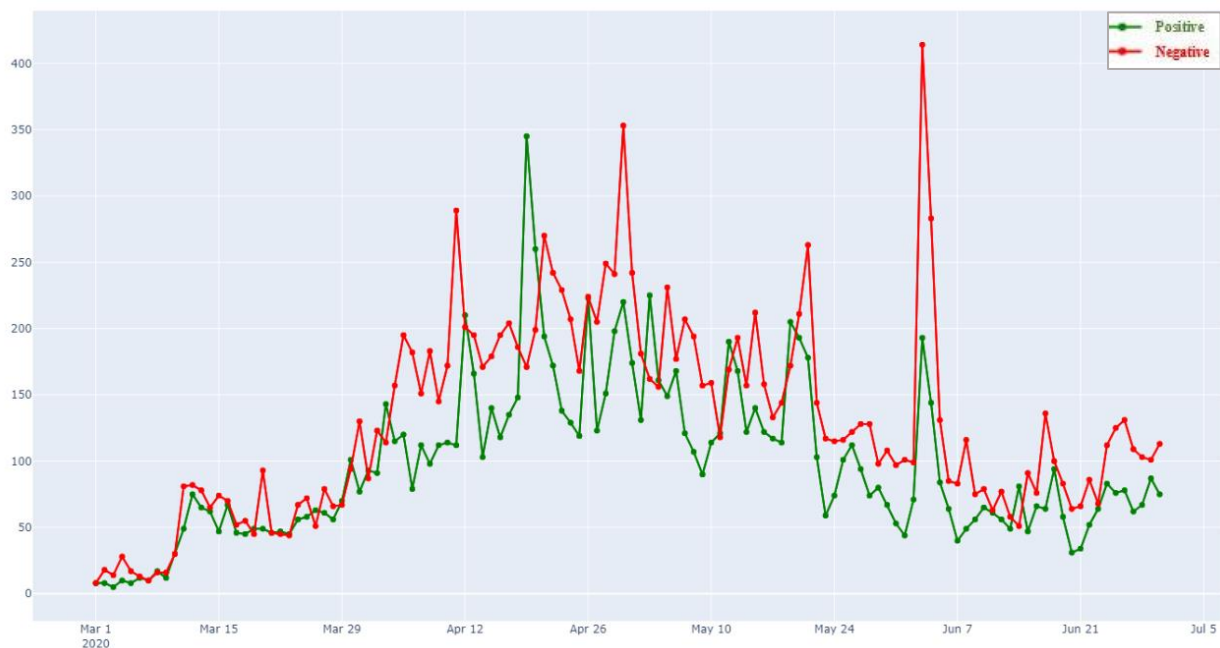


Figure 7. First COVID-19 'Wave' Line Plot of Negative and Positive Sentiment.

The line plot above illustrates that negative sentiment with 34.89% is slightly dominating over the positive sentiment with 26.23% of a total of 45.188 sentiments. The most interesting aspect of this graph is that on the 19<sup>th</sup> of April 2020 there is a high positive sentiment, and a few months later, on the 3<sup>rd</sup> of June 2020 there is a striking high negative sentiment. The word cloud in Figure 8 displays the words most frequently found in the corpus of tweets on the 3<sup>rd</sup> of June. Words like 'covid', 'virus', 'strategy', 'gamble', 'bad', 'die', 'death', 'confirmed', and 'epidemiologist' stand out in the data set on this day.

When looking at the word cloud of the 19<sup>th</sup> of April (Figure 9), it is shown that words like 'open', 'strategy', 'controversial', 'approach', 'corona', 'sick', and 'relaxed' stick out in the dataset. The larger the size of the word in the cloud, the more often it occurs in the corpus of tweets.



The word cloud of negative sentiment of the second COVID-19 ‘wave’ (Figure 12) shows that words like ‘covid’, ‘EU’, ‘death’, ‘diagnosis’, and ‘nothing’ are standing out. In contrast, the words ‘covid’, ‘interesting’, ‘control’, ‘testing’, ‘trump’, ‘honest’, and ‘approach’ catch the eye of the observer when looking at the word cloud of positive sentiment (Figure 13).



Figure 11. Word Cloud of Negative Sentiment 12.11.2020.



Figure 12. Word Cloud of Negative Sentiment of the Second COVID-19 ‘Wave’.

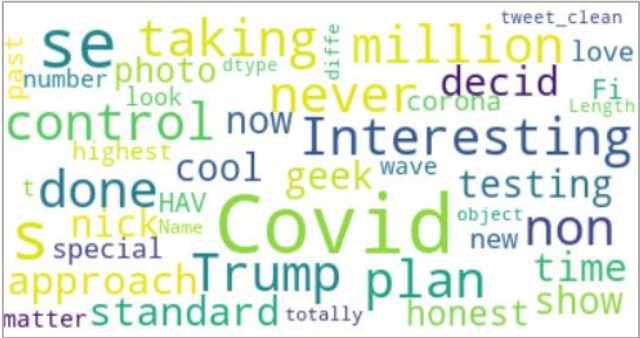


Figure 13. Word Cloud of Positive Sentiment of the Second COVID-19 ‘Wave’.



### Line Plot of Negative and Positive Sentiment of the Third COVID-19 ‘Wave’

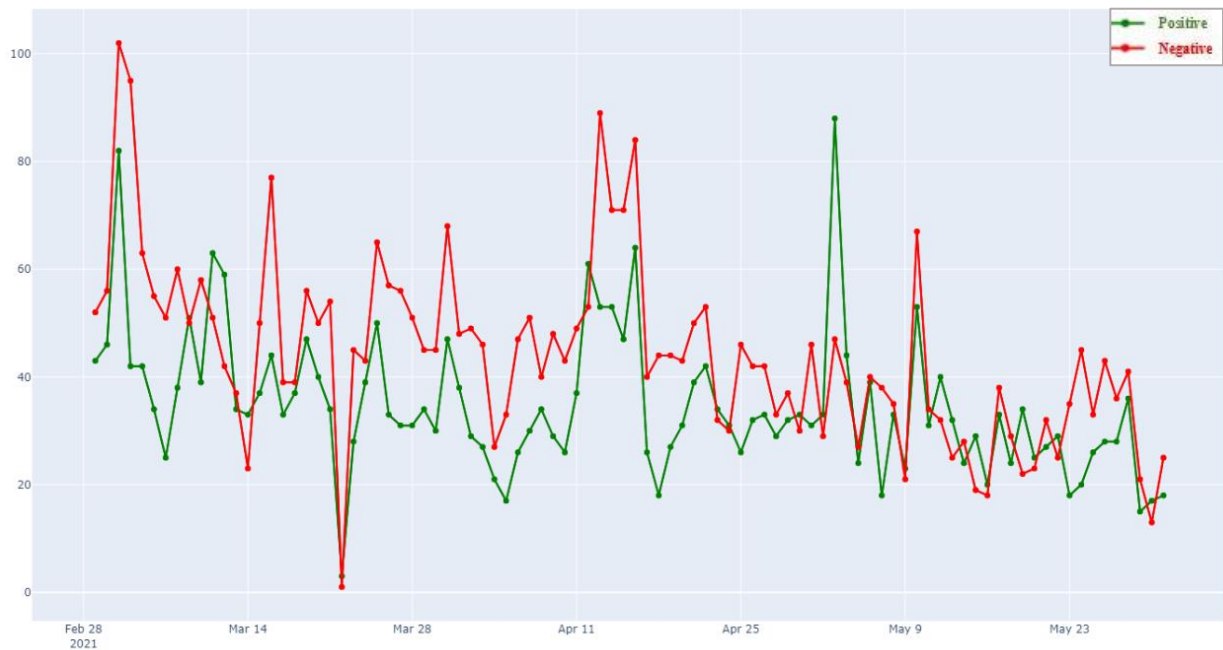


Figure 14. Third COVID-19 ‘Wave’ Line Plot of Negative and Positive Sentiment.

Figure 14 shows that negative sentiment is still slightly dominating over positive sentiment, with 33.90% of negative and 26.67% of positive sentiment of a total of 11.974 sentiments. There are four outstanding main valleys: the 3<sup>rd</sup> of March 2021; the 16<sup>th</sup> of March 2021, the 13<sup>th</sup> of April 2021 and the 16<sup>th</sup> of April 2021. These days, high negative sentiment can be observed. The word cloud of the 3<sup>rd</sup> of March 2021 (Figure 15) shows that the most common words in the corpus of tweets that day include ‘covid’, ‘new’, ‘time’, ‘restaurant’, and ‘shopping’. In contrast to the second ‘wave’, where no peaks of positive sentiment were identified, there is a high positive sentiment on the 3<sup>rd</sup> of May 2021 during the third ‘wave’. Words like ‘vaccine’, ‘will’, ‘safe’, ‘supply’, ‘boost’, ‘everyone’ and ‘Pete’ were often mentioned that day (Figure 16). It is apparent that the negative sentiment increases on the 10<sup>th</sup> of May 2021 compared to the positive sentiment.





positive sentiment that day include ‘corona’, ‘pandemic’, ‘opening’, ‘easy’, ‘good’, ‘dropping’, and ‘happy’ (Figure 19).

When looking at the overall sentiment of the fourth ‘wave’. The word cloud of negative sentiment shows that ‘covid’, ‘death’, ‘emergency’, ‘stranger’, ‘global’ and ‘fake’ stand out in this dataset (Figure 20). Positive sentiment visualized in the word cloud includes words such as ‘covid’, ‘data’, ‘passport’, ‘vaccine’, ‘now’, ‘live’, ‘best’, ‘wanderer’, and ‘free’ (Figure 21). It is apparent that in comparison to the word clouds of negative and positive sentiment of the first ‘wave’, the words in the word clouds of negative and positive sentiment of the fourth ‘wave’ differ, including words like ‘free’, ‘live’, and ‘vaccine’, for instance.

Overall, the findings suggest a change in international audiences’ opinions about Sweden during the four ‘waves’ of the COVID-19 pandemic. Negative sentiment prevailed during the first two ‘waves’ but became weaker during the last two ‘waves’. In addition, a larger amount of sentiments was identified during the first two ‘waves’ compared to the last two. Word clouds also revealed that the topics of conversations slightly differed throughout the four COVID-19 ‘waves’; for instance, in the second ‘wave’, people were talking about positive aspects of ‘honesty’, ‘approach’, and ‘testing’ (Figure 13), however in the last ‘wave’ new positive topics emerged addressing ‘living’, ‘travel’ and ‘freedom’ (Figure 21). Reasons for these changes will be portrayed more in-depth in the discussion.

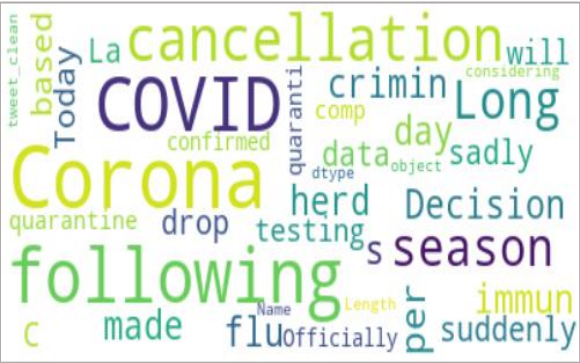


Figure 18. Word Cloud of Negative Sentiment  
03.02.2022.

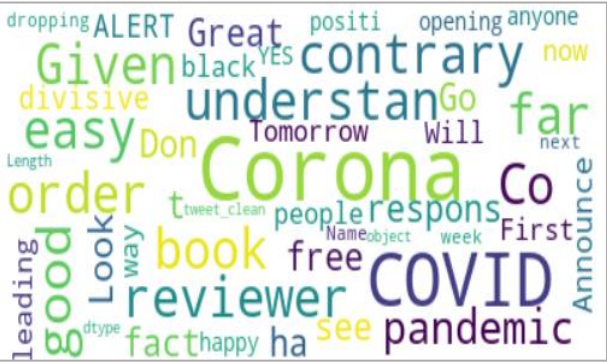


Figure 19. Word Cloud of Positive Sentiment  
03.02.2022.



The process of testing confirmed these limitations, especially in regard to sarcasm (Appendix 5; e.g., Tweet 75614, 90084) and context, as words were often not taken into account based on how they were combined in a sequence (Appendix 5; e.g., Tweet 150983, 182187, 191812).

It is quite apparent that sentiment analysis (SA) is a challenging task of Natural Language Processing (NLP) because, even for humans, it can be challenging to identify sentiments accurately. This difficulty was also experienced personally during the testing stage of this research project. Therefore, as machines learn from labelled data, there is the risk that sentiment analysis (SA) classifiers are not as precise as they should be. On the other hand, an advantage of using a standardized set of rules to go through the data is that it reduces the potential for bias.

Overall, it is argued that even though sentiment predictions might be wrong every once in a while, a correct prediction of 77% can still be expected. Therefore, also regarding the vast amount of this data set of 195.745 tweets, it may be stated that this result is sufficient to identify the general sentiment of a data set. Following this, it can be summarized that sentiment analysis (SA) is successful as a method, and sentiment can be utilized as a proxy for capturing public opinion.

Even though the method has its limitations, it demonstrates the usefulness and efficacy of sentiment analysis (SA) as a Natural Language Processing (NLP) technique in analyzing large sets of social media to gain insight into opinions in form of public sentiments about relevant topics.

## 6. Discussion

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This study investigated how international audiences discussed Sweden during the COVID-19 pandemic on Twitter and if international audiences' opinions about Sweden changed during the four 'waves' of the COVID-19 pandemic on Twitter, and if so, how.

Overall, this study intended to contribute to nation branding and public diplomacy, drawing implications these outcomes might have for Sweden's nation brand using the concepts of nation brand identity and image and nation brand equity (NBEQ). Moreover, the aim was to retrieve empirical results that can be used for further research to test if there is a correlation between international audiences' opinions about Sweden during COVID-19 and its nation brand.

This study's most important empirical findings showed that international audiences were in general negative in discussing Sweden during the COVID-19 pandemic on Twitter. It is also striking that neutral opinions were the highest among all categories. A high amount of neutral sentiments can be explained as Twitter is often used as a news source by news channels due to its real-time exchange of information and retweeting function. News is supposed to be reported in a neutral tone of voice which explains the high amount of neutral sentiments. Another explanation could be due to changing the threshold to (-) 0.25, in which a tweet was assigned to a positive or negative category. Consequently, more tweets were assigned as neutral tweets.

When looking specifically at the four different COVID-19 'waves', a change in people's opinions can be observed. It is apparent that there was more negativity at the beginning and less in the end. More sentiments were identified in the first two 'waves' than in the last two. The positivity almost remained the same, only showing slight changes throughout the four 'waves'. In addition, several peaks and valleys were identified, which will be further discussed in this chapter.

As mentioned in the earlier chapters, there is a lack of understanding of nation branding and public diplomacy in the context of a pandemic. No study to date has examined the international audiences' opinions about Sweden during the COVID-19 pandemic. This implies that limited previous literature is available. However, it is evident that those nations which gained favorability during the COVID-19 pandemic have the chance to attract international

audiences, while those which lost favorability have to regain trust (Ipsos, 2020). This study fills a gap in the nation branding and public diplomacy literature, which has yet to focus on COVID-19.

The discussion is divided into two parts. Firstly, results are interpreted by searching for explanations for striking peaks and valleys in the dataset. Secondly, the results will be discussed more holistically regarding previous literature and nation branding and public diplomacy as a field. This chapter will be rounded off with a discussion of the methodological implications.

## **6.1 Part I. Interpretations and Explanations of the Findings**

The findings have displayed several peaks and valleys in the dataset. Olofsson and Vilhelmsson's (2021) detailed timeline chronicling significant interventions, policies and events in the Swedish management of COVID-19 between 2020 and 2021 is taken as a starting point to find explanations and connections for some of these striking features in the dataset.

On the 17<sup>th</sup> of April 2020, during the first 'wave' of the COVID-19 pandemic, the Swedish Public Health Agency presented a strategy for increased testing for COVID-19 (Olofsson & Vilhelmsson, 2022). Two days later, on the 19<sup>th</sup> of April 2020 positive sentiment about Sweden included words like 'open', 'strategy', and 'approach' (Figure 8), which might be associated with introducing a new testing strategy. Strong negative sentiment was striking on the 3<sup>rd</sup> of June 2020, including words like 'bad', 'death', 'die', and 'epidemiologist' (Figure 9). This might be related to the media articles in 'Dagens Nyheter' and 'The Guardian' portraying Sweden's epidemiologist Anders Tegnell who stated that Sweden could have done things better and they should have done more to prevent the high death rate from COVID-19 (Henley, 2020a; Svahn, 2020).

During the second COVID-19 'wave', the 12<sup>th</sup> of November 2020 showed a striking valley of negative sentiment, including words like 'surge' and 'severity' (Figure 11). During that period, the media reported that new infections and hospital admissions have surged in Sweden (Henley, 2020b). In addition, on the 9<sup>th</sup> of November 2020, issues of testing were reported stating that several labs with the capability and capacity to analyze COVID-19 tests were only used at a fraction of their capacity or were not used at all (Olofsson & Vilhelmsson, 2021). These events might explain why there was a high negative sentiment on the 12<sup>th</sup> of November 2020.

The third COVID-19 'wave' had been characterized by a valley on the 3<sup>rd</sup> of March 2021 and a peak on the 3<sup>rd</sup> of May 2021. On the 3<sup>rd</sup> of March 2021, the Swedish government introduced further COVID-19 restrictions (Olofsson & Vilhelmsson, 2022). Negative

sentiments on that day included words like ‘new’, ‘restaurant’, and ‘shopping’ (Figure 15). Hence, the negative valley of sentiment that day might have resulted due to the implementation of further restrictions referring to restrictions on leisure activities such as going to restaurants or shopping. In contrast, on the 3<sup>rd</sup> of May 2021, the peak of positive sentiment included ‘vaccine’, ‘boost’, and ‘everyone’ as keywords (Figure 16). This might be related to the fact that in May COVID-19 vaccinations were to open up to all adults (The Local, 2021). It was also striking that ‘Pete’ appeared as a word in the word cloud on the 3<sup>rd</sup> of May 2021 (Figure 16). It can be assumed that this refers to the Swedish politician and minister of defence Peter Hultqvist. Peter Hultqvist was directly involved in the developments and national responses to COVID-19 and was therefore directly linked with Sweden’s COVID-19 strategy (Government Offices of Sweden, 2020). During the second COVID-19 ‘wave’, ‘Trump’ also appeared as a word in the word cloud of positive sentiment (Figure 13). Besides, the expression ‘sparkategnell’ referring to Sweden’s epidemiologist Anders Tegnell was multiple times detected in the sample of 1500 tweets from the year 2020 and the sample of 1500 tweets from the year 2021 that were screened to choose additional variables to add to the VADER Lexicon. In alignment with personification research, this indicates how a nation’s image is related to its head of state or political leader (Dinnie, 2016). This shows that in times of pandemics, people compare different countries’ approaches and that politicians also play an essential role in shaping positive or negative sentiment in uncertain times.

In the fourth COVID-19 ‘wave’, the most striking peak and valley at the same time was on the 3<sup>rd</sup> of February 2022. Negative sentiment included words like ‘flu’, ‘suddenly’, and ‘cancellation’ (Figure 18). Positive sentiment included words like ‘opening’, ‘dropping’, and ‘happy’ (Figure 19). This peak and valley can be explained when looking at the happenings of the 3<sup>rd</sup> of February 2022. On that day, the Swedish Government announced that most COVID-19 restrictions would be removed from the 9<sup>th</sup> of February 2022 (Government Offices of Sweden, 2022). Some people might have been content and relieved about the lifting of the restrictions, while others might have been more critical towards Sweden’s premature ending of the COVID-19 restrictions.

Overall the results showed that negative sentiment dominated throughout all four ‘waves’ of COVID-19. However, during the first two ‘waves’, negative sentiments were stronger and more sentiments, in general, were identified compared to the last two ‘waves’. Opinions about Sweden during the COVID-19 pandemic might have been more polarizing during the first two ‘waves’ as Sweden was standing out in comparison to other countries due to its distinct approach of managing the COVID-19 pandemic with no compulsory measures

and trusting on individual's voluntary compliance (Giritli Nygren & Olofsson, 2021). Sweden was often tarnished by using a different approach as they had relied on different practices and values and did not adhere "to the orthodoxy of knowledge and practice on the 'best practice' to deal with the COVID-19 pandemic" (Simons, 2020, p. 55). This led to considerable attention in the international media. In the beginning phase of the COVID-19 pandemic, Sweden's approach was harshly criticized and portrayed unilateral in the media, describing Sweden's approach as 'The Swedish Experiment' (Irwin, 2020). Six main narratives emerged in the media reporting, namely 'life is normal in Sweden', 'Sweden has a herd immunity strategy', 'Sweden is not following WHO recommendations', 'the Swedish approach is failing', and 'Swedes trust the government' (Irwin, 2020, p. 2). This resulted in an identity-image gap for Sweden, meaning that external audiences have not perceived them for what they truly are and stand for (Dinnie, 2016). In the international mass media, narratives such as Sweden has a herd immunity strategy were prevailing even though the Public Health Agency officially denied that natural herd immunity was involved in the Swedish strategy (Lindström, 2021). Thus Swedish representatives were urged to put significant energy into combating misinformation rather than focusing solely on solving domestic challenges (Irwin, 2020).

This might have affected the international audiences' opinions about Sweden during the COVID-19 pandemic, resulting in higher negative sentiment and more polarizing discussions.

In the last two 'waves' expressed sentiments in total were fewer than in the first two 'waves'. Sweden's handling of the COVID-19 pandemic might not have been as polarizing for international audiences as at the beginning of the pandemic. In addition, during the first two 'waves', Sweden faced more deaths from COVID-19 than during the last two 'waves', which might have led to increased discussions and criticism about Sweden's approach (World Health Organization, 2022).

An assumption for the decrease of negative sentiment and amount of sentiments in total might be that people have been exhausted by their situation in their home country, tired of lockdowns and longing for freedom, travelling, and living a 'normal life'. This might explain the emergence of positive topics such as 'living', 'travel' and 'freedom' in the last 'wave' (Figure 21). It could even be argued that people were so frustrated that they would have wished to live in Sweden to get a bit of freedom back into their lives. Another explanation might be that people have been exhausted talking about the pandemic. The public debate might have been reduced by other news such as the Olympics in Tokyo, the Taliban's return to power and Putin's threats to mount a major offensive against Ukraine.

## **6.2 Part II. Implications for Nation Branding, Public Diplomacy and Sweden as a Nation Brand**

A sentiment analysis (SA) was conducted to comprehensively explore the international audiences' opinions about Sweden during the COVID-19 pandemic to draw on implications this might have for Sweden's nation brand. After looking at possible explanations of the findings in the dataset, it can be discussed more holistically what implications these outcomes might have on Sweden as a nation brand and nation branding and public diplomacy as a field. It must be noted that these implications are drawn on a hypothetical basis, and further research is needed to examine if there is a correlation between people's opinions about Sweden during COVID-19 and its nation brand.

### ***6.2.1 Theoretical Implications***

This study contributes to nation branding and public diplomacy as research fields, with being one of the first that explores nation brand image perceptions in times of pandemics, with COVID-19 as an example. Previous literature on nation branding and public diplomacy in times of crises has shown that studies mainly focused on the communication management of governments instead on the opinions of people. Thus, this study fills a void by examining public opinions about a country during a pandemic and linking it to its nation brand.

By integrating previous research on crises, it is demonstrated that maintaining a country's nation brand image can be challenging in times of crises and geopolitical uncertainties. Mainly, pandemics such as the COVID-19 pandemic differentiate themselves from other crises as they are much more complex and will often last for months or even years with a negative impact on society, economy and health (Heide & Simonsson, 2021). In alignment, a country's ability to manage its nation brand and project influence depends on how it has reacted to the COVID-19 pandemic (Lee & Kim, 2021). Hence, this study links nation branding and public diplomacy to the concept of pandemics and emphasizes the importance for scholars within these fields to focus more on pandemics as crises in future studies.

Further, this study has utilized Dinnie's (2016) asset-based nation brand equity (NBEQ) model to highlight the power of country image perceptions in creating a strong nation brand. It is one of the first studies that utilizes this model to explore nation brand image perceptions in the context of pandemics. According to the concept of nation brand image and the theory of nation brand equity (NBEQ), building a strong nation brand image contributes to nation brand equity (NBEQ). Nation brand equity (NBEQ) is the sum of perceptions people have about a brand that leads to the value of a brand (Chernatony & McDonald, 2013). Building a strong



nation brand image is important for countries to limit negative and reinforce positive perceptions. It is constructed based on the sum of beliefs people hold about destinations (Dinnie, 2016; Teodorović & Popesku, 2016). Negative perceptions can damage the overall nation brand equity (NBEQ) of a country.

As elaborated previously, the topic of nation brand equity (NBEQ) and the value of nation brands remains scarce in literature as the nation is a (relatively new) entity that is being branded (Steenkamp, 2021). Thus, this study aimed to contribute to nation branding and public diplomacy by drawing attention to the importance of nation brand equity (NBEQ) for a country that can be either a severe liability and powerful asset or the exact opposite.

Bringing this study's results in line with the concepts of nation brand image and nation brand equity (NBEQ) provides interesting insights. The results have shown that when looking at international audiences' opinions about Sweden during the COVID-19 pandemic, negative sentiment dominates over positive sentiment. By drawing on previous literature, it is evident that people's opinions and perceptions about a country can strengthen or weaken a nation brand image (van Ham, 2002). Additionally, Lee & Kim (2021) have argued that overall positive sentiments resulting from a sentiment analysis (SA) suggest a positive nation brand for South Korea. The sentiment analysis (SA) results of this study reveal that negative sentiments are more likely to be associated with Sweden during the COVID-19 pandemic. Accordingly, it can be hypothetically argued that there is a risk that COVID-19 might lead to a deterioration of Sweden's global image in the long term and might weaken its nation brand. This highlights that people are strategic assets of nations that can either contribute to or weaken a nation's brand equity (NBEQ) (Dinnie, 2016).

Independent from the Swedish context, this study has contributed to our theoretical understanding regarding the role of governments who have to listen to external audiences strategically; to publics whose opinions can either impair or fortify a nation brand image; and to social media, which is a powerful platform for interactions that can shape how a country is perceived.

Governments are responsible for regularly measuring people's expectations and perceptions about their country and strategically listening to international audiences. Negative perceptions about a country can weaken its nation brand. Consequently, strategies need to be implemented to ensure that nation brand equity (NBEQ) will not be deteriorated in the long term. As Falkheimer and Heide (2018) point out, it is indispensable to systematically listen to external and internal stakeholders through a strategic communication lens.

This emphasizes the role of people who have the power to shape perceptions of a nation brand image. People are country's strategic assets that can help build its soft power. Hence, people's negative perceptions of a country can weaken its nation brand equity (NBEQ) which reduces the brand's value. Opinions and discussions changed swiftly throughout the four COVID-19 'waves'. This shows that public opinion is swaying and easily impacted by, for instance, decisions of governments or media reports in times of pandemics.

Lastly, social media has changed how we communicate, engaging people to build communities and raise their opinions online. Sevin and Ingenhoff (2018) argue that interactions on social media can potentially change the way a country is perceived. Before data cleaning 232.614, tweets were retrieved in this study. The power of social media as a discussion platform for polarizing topics is highlighted. This stresses the significance for nation branding and public diplomacy scholars to conduct more research on the link between the power of social media as a discussion platform and the strength of a nation brand.

### ***6.2.2 Practical Implications***

This study is relevant to the Swedish Government and NSU, including the Swedish Institute, to learn about this COVID-19 pandemic, future crises and pandemics.

Understanding publics and to investigate how public opinion forms in the context of a pandemic is a significant factor in strategic communication and fundamental for governments to build effective strategies and better manage the process of building nation brand equity (NBEQ). The Swedish Government and NSU can use this study's results to learn from this COVID-19 pandemic. They can consider adapting their nation branding and tourism strategies to ensure that the opinion of international audiences about Sweden will not weaken its nation brand equity (NBEQ) in the long term. Emphasis should be on promoting Sweden as an attractive tourist destination and regaining trust.

As a practical contribution, this study recommends that governments pay closer attention to people's opinions as they hold power to impair or fortify their nation brand image. From a strategic communication perspective, adopting a holistic view and listening to internal and external audiences is indispensable as images and places are shaped by people (Cassinger, 2020).

Listening to public opinions and building strategies to maintain a strong nation brand has economic reasons for a nation, such as increasing tourism, investments, expanding global power, and partnerships. Beyond that, it has implications on an individual level. A nation brand can be seen as an embodiment and reflection of an individual national identity (Torelli, 2021).

Thus, it has consequences for how people view themselves, how they identify with their home country, how they are treated globally, and which destinations they travel to. A negative nation brand image could lead to an identity crisis for inhabitants, leaving them frustrated and unsatisfied with their own country and not proud of their nation. This highlights the importance for governments to strengthen its nation brand and build trust.

It is also worthy to note that even though the focus of this study was on Sweden, it can serve as an example for other nations. More concretely, by highlighting the importance of public opinions, strategic listening, the power of social media platforms and their potential impacts on a nation brand.

### **6.3 Part III. Methodological Implications**

After looking at the interpretations of the findings and their implications for nation branding, public diplomacy and Sweden as a nation brand, a step back is taken to discuss its wider methodological implications for the field of nation branding, public diplomacy, and social sciences in general.

With the rise in the amount of data on social media, it has become challenging to monitor public's opinions, attitudes and emotions. Consequently, sentiment analysis (SA) has grown popular for analyzing large amounts of social media content which is impossible to process manually. Regarding the field of nation branding, sentiment analysis (SA) is a great tool to identify opinions expressed online about a nation. This allows governments to adapt or develop and implement nation brand strategies accordingly.

For instance, Lee (2021) applied sentiment analysis (SA) to identify sentiments about China's vaccine diplomacy. Other studies conducted a sentiment analysis (SA) to understand public sentiment about South Korea's COVID-19 mitigation efforts or to identify international perceptions of South Korea about the South Korean movie 'Parasite' (Lee & Kim, 2021; Lee, 2020). This shows that text mining technologies are becoming increasingly relevant for social science research to extract a large volume of user-generated data (Ampofo et al., 2015).

On the surface, sentiment analysis (SA) might seem straightforward, but its potential pitfalls should not be ignored. As mentioned previously in the Methodology Chapter, it is not a method without flaws. Sarcasm, abbreviations, jargon and context are often difficult for algorithms to detect, leading to errors in sentiment detection.

Thus, it is essential to conduct a quality check to see if sentiment analysis (SA) assigns the sentiments correctly to the tweets. In this study, a sample of 100 tweets had been manually coded to test sentiment analysis (SA) as a method and if sentiment can be utilized as a proxy

for capturing public opinion. This revealed that human coded sentiment analysis (SA) is more accurate in understanding the complexity of human language, which algorithms struggle with. Concerning the time and scope of this study, it was not feasible to manually code all extracted tweets. However, for future studies within this field, it is suggested to combine sentiment analysis (SA) with human analysis of all tweets for more accuracy.

In addition, word clouds have been used to visualize word frequency. Word clouds were useful in better understanding peaks or valleys in the dataset by visualizing and highlighting relevant keywords. Hence, they were a great visually appealing tool in complementing the line plots of the sentiment analysis (SA). However, it needs to be taken into consideration that they lack context by failing to portray relationships between topics or words. This makes it also difficult to capture the differences between words of importance. In addition, word clouds are prone to bias, meaning their interpretation relies heavily on the observer's view. Word clouds can also lead to overgeneralization. For instance, overrepresenting the most frequently used words in the tweets. This shows that word clouds are a great visual aid but should be considered cautiously.

Overall, this study explored sentiment analysis (SA) as a method that differentiates itself from traditional methods such as interviews, focus groups or surveys. It has been identified as being particularly relevant for analyzing large amounts of social media data. In strategic communication, it is indispensable to listen to stakeholders' opinions, attitudes and emotions (Falkheimer & Heide, 2018).

In this study, sentiment analysis (SA) has proven itself a reliable tool to capture public opinions in the form of sentiments, given the strong link between the word clouds of the peaks and valleys with Olofsson and Vilhelmsson's (2022) detailed timeline and news coverage of Sweden.

However, the pitfalls of this method should not be ignored, rather they should be understood thoroughly and handled with caution to be able to benefit from the advantages of this method simultaneously. Thus, it aims to encourage social scientists and master's students within the field of nation branding, public diplomacy and strategic communication to step out of their comfort zone and apply this method to extract topics and sentiments from texts to uncover complex social phenomena.

# 7. Conclusion

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This chapter builds the conclusion of this study. The three main contributions of this study are summarized. The chapter resumes with the suggestion of further prospective studies on nation brand image perception in times of pandemics.

## 7.1 Contributions of this Research

While several studies have addressed nation branding and public diplomacy in times of crises or conflict (Lee & Lin, 2017; Cassinger et al., 2016; Peijuna et al., 2009), there is an evident lack of understanding of these concepts in the context of a pandemic. This study aimed to gain a deeper understanding of nation brand image perception by studying international opinions in the form of sentiments about Sweden during the COVID-19 pandemic. Social media content on Twitter had been analyzed to provide insights into the opinions of society and the world. Overall, the results in this study have illuminated the understanding of nation brand image perception in times of pandemics with a focus on Sweden.

Three significant contributions at theoretical, practical and methodological levels have been made. First, by exploring public opinion on social media in times of a pandemic, this study has contributed to our understanding of the publics' role, which can either impair or fortify a nation brand image. At the same time, it elevated the role of the public in nation branding and public diplomacy for the state by demonstrating that people are strategic assets of nations that can help build their soft power and strengthen their nation brand. Thus, governments are encouraged to listen and pay closer attention to publics strategically. This study embraced digitalization, with social media being a polarizing platform of interactions that can shape how a nation is perceived.

Secondly, the application of Dinnie's nation brand equity (NBEQ) model contributed to nation branding and public diplomacy by highlighting the importance of country image perceptions in relation to the value of its nation brand. The value of nation brands and the topic of nation brand equity (NBEQ) remains scarce in literature (Steenkamp, 2021).

Lastly, sentiment analysis (SA) was utilized to explore public opinions in the form of sentiments. This study took a challenging stance by applying Natural Language Processing (NLP) technique and distancing itself from traditional qualitative or quantitative research.

Hence, this study also contributed methodologically by introducing a new method worth exploring within nation branding studies, public diplomacy, and strategic communication.

## **7.2 Suggestions for Further Research**

This study aimed to collect data on opinions about Sweden during COVID-19 and test the method of sentiment analysis (SA) to see if sentiment can be utilized as a proxy for capturing public opinion. Valuable contributions were made by collecting data that can be used for further research.

Researchers can use this data to investigate if the proxy can serve as a reliable indicator for the nation brand image perception. This could be further explored and tested in a quantitative study to investigate if there is a correlation between public opinions about Sweden during COVID-19 and its nation brand. It will be interesting to look at the identified peaks and valleys and explore if the nation brand performed poorly or better during these dates than before.

As pandemics are much more complex and will often last for years, negatively impacting society, economy and health (Heide & Simonsson, 2021), researchers should conduct longitudinal studies to measure if public opinions about Sweden during COVID-19 have impacted its nation brand.

Secondly, it has been outlined that sentiment analysis (SA) has its limitations resulting in an inaccuracy of 23% in the sample of this study. Thus, further research is urged to consider this limitation and combine automated sentiment analysis (SA) with human analysis of all tweets for greater accuracy.

Lastly, another aspect highlighted is that the findings of this study are limited to Twitter users. It is also worthy of focusing attention on future studies on other social media platforms, such as Facebook, to gain a more holistic view of public opinions about Sweden during COVID-19.

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## 9. Appendices

---

### 9.1 Appendix 1. Script Text Mining

```
pip3 install twint

import twint

c = twint.Config()

c.Search = "[Sweden, Covid or Corona]"
c.Since = "2020-01-27"
c.Until = "2022-02-19"
c.Store_csv = True
c.Output = "Tweets.csv"

twint.run.Search(c)
```

### 9.2 Appendix 2. Script Sentiment Analysis (SA) and Line Plots

```
#Sentiment Analysis

import pandas as pd
import nltk
import re

df = pd.read_csv('Tweets.csv', sep=';')
df.head()

nltk.download("vader_lexicon")
from nltk.sentiment.vader import SentimentIntensityAnalyzer

sid = SentimentIntensityAnalyzer()

nltk.download("words")
words = set(nltk.corpus.words.words())
```

```
#Cleaning Tweets
```

```
def cleaner(tweet):  
    tweet= re.sub("[^a-zA-Z]",  
                  " ",  
                  str(tweet))  
    tweet = re.sub(@"[A-Za-z0-9]+", "", tweet)  
    tweet = re.sub(r"(?:\@|http?://|https?://|www)\S+", "", tweet)  
  
    tweet = " ".join(tweet.split())  
    tweet = tweet.replace("#", "").replace("_", " ")  
    tweet = " ".join(w for w in nltk.wordpunct_tokenize(tweet)  
                      if w.lower() in words or not w.isalpha())  
    return tweet
```

```
df['tweet_clean'] = df['tweet'].apply(cleaner)
```

```
#Performing the sentiment analysis
```

```
word_dict = {'swedenwasright':1, 'nomorelockdowns':1, 'elderpurge':-1,  
             'senicide':-1, 'genocide':-1, 'sparkategnell':-1, 'hubris':-  
             1, 'wearamask':-1}
```

```
sid = SentimentIntensityAnalyzer()  
sid.lexicon.update(word_dict)
```

```
list1 = []  
for i in df['tweet_clean']:  
    list1.append((sid.polarity_scores(str(i)))['compound'])
```

```
#Converting the compound scores into categories
```

```
df['sentiment'] = pd.Series(list1)
```

```
def sentiment_category(sentiment):  
    label = ''  
    if(sentiment > 0.25):  
        label = 'positive'  
    elif(sentiment < -0.25):  
        label = 'negative'  
    else:  
        label = 'neutral'  
    return(label)
```

```
df['sentiment_category'] = df['sentiment'].apply(sentiment_category)
```

```

#Visualization of Data

neg = df[df['sentiment_category']=='negative']
neg = neg.groupby(['date'],as_index=False).count()

pos = df[df['sentiment_category']=='positive']
pos = pos.groupby(['date'],as_index=False).count()

pos = pos[['date','id']]
neg = neg[['date','id']]

import plotly.graph_objs as go

fig = go.Figure()
for col in pos.columns:
    fig.add_trace(go.Scatter(x=pos['date'], y=pos['id'],
                             name = col,
                             mode = 'markers+lines',
                             line=dict(shape='linear'),
                             connectgaps=True,
                             line_color='green'
                             )
                 )

for col in neg.columns:
    fig.add_trace(go.Scatter(x=neg['date'], y=neg['id'],
                             name = col,
                             mode = 'markers+lines',
                             line=dict(shape='linear'),
                             connectgaps=True,
                             line_color='red'
                             )
                 )

fig.show()

```

### 9.3 Appendix 3. Script Bar Charts

```

#Bar Charts

import pandas as pd
import plotly.express as px

```

```

file =
open(r'C:\Users\Verena\AppData\Local\Programs\Python\Python39\Tweets.csv')
df =
pd.read_csv(r'C:\Users\Verena\AppData\Local\Programs\Python\Python39\Tweets
.csv', sep=';', encoding='latin-1')

newdf = df[(df['date']>='2020-01-27') & (df['date']<='2022-02-19')]

fig = px.histogram(newdf, x="sentiment_category",
                    title='Frequency of Categorized Sentiments',
                    color='sentiment_category',
                    text_auto=True,
                    color_discrete_sequence = ["red", "blue",
"green"],
                    labels = {
                        "sentiment_category": "Sentiment Category",
                    },
                    )
fig.show()

```

## 9.4 Appendix 4. Script Word Clouds

```

#wordclouds

import pandas as pd
import matplotlib.pyplot as plt
from wordcloud import wordCloud

file =
open(r'C:\Users\Verena\AppData\Local\Programs\Python\Python39\Tweets.csv')
df =
pd.read_csv(r'C:\Users\Verena\AppData\Local\Programs\Python\Python39\Tweets
.csv', sep=';', encoding='latin-1')

df2 = df[(df['date']>='2020-01-27') & (df['date']<='2022-02-19')]
positive = df2[df2['sentiment_category']=='positive']
wordcloud = wordCloud(max_font_size=50, max_words=500,
background_color="white").generate(str(positive['tweet_clean']))
plt.figure()
plt.imshow(wordcloud, interpolation="bilinear")
plt.axis("off")
plt.show()

```



## 9.5 Appendix 5. Testing the Sentiment Analysis (SA)

\*Tweets were anonymized but displayed in the original version for simplified reading.

Number of Tweet	Date	Tweet	Sentiment Category	Testing
1810	10.02.2022	Sweden are you nuts? Putting Covid Microchips WHERE Now?! This Is CRAZY! <a href="https://t.co/1F3whCeIQW">https://t.co/1F3whCeIQW</a> via	negative	correct
2472	09.02.2022	Sweden ends COVID-19 testing as pandemic restrictions lifted <a href="https://t.co/fui3TWC2YJ">https://t.co/fui3TWC2YJ</a> <a href="https://t.co/o1JtTRQ3hW">https://t.co/o1JtTRQ3hW</a>	neutral	correct
3171	07.02.2022	Coronavirus: Sweden to end COVID-19 restrictions   CTV News <a href="https://t.co/ASsaxa5OUq">https://t.co/ASsaxa5OUq</a>	neutral	correct
3198	06.02.2022	Yes a reputable doctor.. he said "Covid sanity comes from Nordic countries: Denmark ,Sweden, Norway, and Finland removing all Covid restrictions. Back to full good old normal."	positive	correct
4602	03.02.2022	#Sweden drops all restrictions against COVID-19 <a href="https://t.co/T34KYr2rrc">https://t.co/T34KYr2rrc</a>	neutral	correct
6033	28.01.2022	Sweden govt has opted for Covid 19 vaccination for Children aged between 5- 11 This is great newz ... Hope India follow the same at the earliest ... #COVID19 <a href="https://t.co/o46uK9v6xB">https://t.co/o46uK9v6xB</a>	positive	correct
8349	16.01.2022	There is Rea mental illness here. This statement was true for every wave of covid with and without vaccines. Except with vaccines cases and al cause mortality is higher. We should have just done what Sweden did. Almost almost nothing. <a href="https://t">https://t</a> .	neutral	false
9155	11.01.2022	Swedens corona strategy a success story <a href="https://t.co/pr1gnUHMj0">https://t.co/pr1gnUHMj0</a>	positive	correct

9528	09.01.2022	Yeah but what are you trying to say though? Sweden was very open when it comes to Covid measures and it worked in their favor, but the purple countries were also very lax in terms of measures, Italy was strict and is rather purple	positive	correct
7692	20.01.2022	Is it better if they stay in Sweden and being 100% exposed to long covid and heart/brain damage?	negative	correct
18980	12.11.2021	<a href="https://t.co/OBB1r1wWgK">https://t.co/OBB1r1wWgK</a> Large study of COVID vaccine side effects in Sweden Recently, researchers from Sweden reported population-based, age- and sex-specific background incidence rates of conditions that represent potential COVID-19 vaccine ad	neutral	correct
20387	05.11.2021	What is the covid status in Sweden? Are you guys fucked just as we are in the states?	neutral	correct
24192	12.10.2021	Covid Kids will change this planet in an amazing way. Improv games to play with your children. This is a renaissance period for the World, <a href="https://t.co/LosvbeSitw">https://t.co/LosvbeSitw</a> #california #newyork #york #texas #virgina #sweden #findland #australia #newzealand #covid #england #southafrica	positive	correct
13156	19.12.2021	I have received more press in Sweden for NOT undertaking a study than we ever have for actually doing any study. I got to know the state epidemiologist Anders Tegnell through my early COVID response policy work. His position on masks has been a bit strange.	negative	correct

31518	11.09.2021	10% of Sweden's population has been infected with Covid. Their death ratio at over 1% is the same as the U.S. Not sure why Israel is compared. They are no better off. And who knows if they are honest	negative	correct
32635	07.09.2021	In sweden 14,6K deaths of a population of 10,4 millions In Israel 7,2K of a population of 8,8 millions. In Sweden majority of the deaths is old people 85+, due to bad health and COVID-19	negative	correct
36893	19.08.2021	In Sweden weve been hit hard, but at least people arent scared to death and mentally broken down if we get one case of covid. And people get vaccinated.	neutral	correct
37159	18.08.2021	Every country has done something right fighting covid (ok, maybe not Sweden) and all countries made/make mistakes. But saying "hey, look, they're even worse" is no solution, no prevention, no help for #longcovid, no solution for children is schools.	negative	correct
37502	16.08.2021	It is really sad what is happening and I think this needs to be talked about way more. The long term impact of Lockdowns is way more destructive and costly than Covid could have ever been if handled like a place like Sweden	negative	correct
38192	12.08.2021	Sweden has never had lockdowns nor mask mandates and they've just reached zero covid deaths. Sweden is doing just fine. Sweden is the elephant in the room. Do not allow fascists like this to take your freedoms away from you	neutral	false

44464	12.07.2021	Greta Thunberg poses with the Swedish-Somali gangster rapper 1.Cuz (real gangster involved in shootings and gang conflicts in Stockholm) for a #SleevesUp COVID-vaccine campaign organized by attention-seeking celebrities in #Sweden #GretaThunberg <a href="https://t.co/IVA3S0ZO6r">https://t.co/IVA3S0ZO6r</a>	negative	correct
45051	06.07.2021	Sweden maintained its freedom and its economy performed better.	positive	correct
27435	02.10.2021	No one is wearing a mask in Sweden anymore and it's freaking me out. Technically all the Covid restrictions have been lifted. But it's so nice to see people happy and unstressed.	positive	correct
51160	04.05.2021	Read up Sweden didnt do lockups and masks and everything yet there covid cases are minimum thr countries doing lockdown and masks has more deaths and economic failures due to this	neutral	correct
53322	16.04.2021	If Swedens Covid strategy is such a disaster, why is it still so popular? <a href="https://t.co/yXF71F8zFm">https://t.co/yXF71F8zFm</a>	neutral	correct
31553	11.09.2021	Take the vaccine if you want. Great. I'd highly recommend them for those who have never had Covid, are of age or st risk health wise. Otherwise, best solution to ending pandemic is to follow Sweden with herd immunity.	positive	correct
42872	24.07.2021	Did you know all the people in Sweden are dead from covid lol Å, ä, ç, Ë, Å, ä, ç, Ë, Å, ä, ç, Ë, Å, ä, ç, Ë	negative	correct
43956	17.07.2021	One I am more worried about long covid in kids. There was a thread I saw on hear a couple of days ago about kids in Sweden and it was heartbreaking. I am not convinced we have a good understanding on LC spread and depth yet.	negative	correct

66797	25.01.2021	#Sweden is painted dark red when the European Commission wants to introduce a new marking for the worst affected in the #Corona pandemic. At the same time, calls are made for mandatory corona tests when entering from countries outside the EU. <a href="https://t.co/cEKJcSC6W8">https://t.co/cEKJcSC6W8</a>	negative	correct
75614	18.12.2020	Finally. We won! <a href="https://t.co/ljdicQFZri">https://t.co/ljdicQFZri</a> #Sweden tells citizens to wear masks on public transport as it struggles with COVID-19 resurgence   Euronews	positive	false
76742	15.12.2020	"Look at Sweden, they've been perfectly fine at handling Covid"	positive	correct
77513	13.12.2020	Sweden running out of intensive care beds amid spiralling Covid cases <a href="https://t.co/SKIzAcJUFV">https://t.co/SKIzAcJUFV</a>	positive	false
83804	23.11.2020	Sweden's let COVID rip policy is not going so well. Australian LNP had the same policy but #DanielAndrews made them see the light. #Scom now telling the world how well he dealt with the pandemic. Not a leader just a Liberal.	positive	false
88385	12.11.2020	Sweden Covid-19 update: <a href="https://t.co/fMpf1b2dvL">https://t.co/fMpf1b2dvL</a>	neutral	correct
90084	08.11.2020	Well well what have we got here? Sweden seems to have been demoted from "Mecca of global covid responses" to "less shit than France". Love the way you've lowered the bar.	positive	false
91660	02.11.2020	Sweden hits highest daily COVID-19 spread as chief epidemiologist says herd immunity not 'ethically justifiable' <a href="https://t.co/sKiQR4ycn8">https://t.co/sKiQR4ycn8</a>	neutral	correct
95364	27.10.2020	Going through disinformation that will be presented (love this tactic) - People do die from COVID. - pursuing herd immunity is "the most unethical, racist strategy" to deal with COVID -	negative	correct

		SWEDEN! Is not a good example for us.		
100492	16.10.2020	Land of the mask-free: The real lessons from Swedens approach to covid-19 <a href="https://t.co/jNzQeuQTJJ">https://t.co/jNzQeuQTJJ</a>	positive	false
101122	15.10.2020	sweden basically had one of the worst responses to covid-19 <a href="https://t.co/mpnGz6P3iz">https://t.co/mpnGz6P3iz</a>	negative	correct
74061	21.12.2020	Sweden is getting a reality check on Covid <a href="https://t.co/44NQyHJAL6">https://t.co/44NQyHJAL6</a>	neutral	correct
77903	12.12.2020	Judging by the 14-day cumulative number of COVID-19 cases per 100 000 people shown here Sweden is doing a lot worse than Germany. <a href="https://t.co/KtpeDhZPaf">https://t.co/KtpeDhZPaf</a>	negative	correct
71890	30.12.2020	No herd immunity in sight - but plenty of 'herd think'. Good article on the Covid-19 failure that is Sweden. 'As Covid death toll soars ever higher, Sweden wonders who to blame' <a href="https://t.co/aC1hZR9a0">https://t.co/aC1hZR9a0</a>	negative	correct
92312	01.11.2020	Sweden does not have herd immunity. If you think they have herd immunity, explain why covid cases and ICU admissions are rising. <a href="https://t.co/B34jowol70">https://t.co/B34jowol70</a>	positive	false
72051	29.12.2020	Hey Sweden, now you've realized your COVID strategy is a failure, how about looking at your sex work strategy? <a href="https://t.co/cFli4B1EZb">https://t.co/cFli4B1EZb</a>	negative	correct
101122	15.10.2020	sweden basically had one of the worst responses to covid-19 <a href="https://t.co/mpnGz6P3iz">https://t.co/mpnGz6P3iz</a>	negative	correct
103666	11.10.2020	Look at Sweden. No masks, no lockdowns... no more covid	negative	false
103930	11.10.2020	So can you explain why Sweden's approach and Covid curve is bad vs. everyone else's? Can you explain why Stanford's experts are somehow inferior in opinion than others? People should stop pretending	negative	correct

105149	08.10.2020	How Sweden hopes to prevent a second wave of covid-19 ON A CRISP October evening the tables outside Stockholm's trendy bars and restaurants sit empty. Inside, most tables are full. As life moves indoors in the coming months, covid-19 cases will ine... <a href="https://t.co/k2ajE8bkkZ">https://t.co/k2ajE8bkkZ</a> #EU <a href="https://t.co/L4o5c0E36F">https://t.co/L4o5c0E36F</a>	neutral	correct
105246	08.10.2020	From viewpoint where Covid deaths is the *only* metric - yes. But there are many other metrics that should be taken into account. There have been so many predictions about Sweden that were so horribly wrong. That alone is a huge success.	negative	false
105483	07.10.2020	COVID-19 Sweden stats New cases: null Total cases: 96677 New deaths: +5 Total deaths: 5892	neutral	correct
105913	07.10.2020	I personally didn't think we should've shut down in the first place look at Sweden, Texas and Florida they didn't ever shut down and they have less covid cases per day with a higher population than us	neutral	false
110816	25.09.2020	What lessons can Europe learn from Sweden's Covid-19 experience? <a href="https://t.co/ooLSf6nsqf">https://t.co/ooLSf6nsqf</a> Americans will miss the larger sociological significance of this comparison. One, Swedes have much stronger social solidarity. We practically loathe each other.	positive	correct
114758	19.09.2020	10 million people in Sweden in an area 85 times larger than the UK, hospitalisation is going up currently over 200 a day, it takes weeks/months to die of Covid	negative	correct

116065	17.09.2020	Sweden Records Lowest Level Of COVID-19 Cases Since March -- With No Lockdown via <a href="https://t.co/dSlz1leMIK">https://t.co/dSlz1leMIK</a>	negative	false
118211	13.09.2020	The number of COVID deaths in Sweden was 5837 a couple of days ago. With a population of just under 11m it would be about 36k deaths compared with the U.K., however Sweden has a much higher rural population with a higher land mass.	neutral	correct
120281	10.09.2020	not easy to combat theories when only 6% of the 180k that died were directly attributed to covid. wonder if sweden was sending people that were sick into nursing homes. and when your test shows positive for cold and flu viruse	negative	correct
122261	05.09.2020	People who say "Sweden did nothing" ignore the fact that Covid outcomes are driven by national/state/local government action and the choices that individual citizens make. <a href="https://t.co/MtyW49MVUZ">https://t.co/MtyW49MVUZ</a>	positive	correct
125520	28.08.2020	Last I checked nobody in Sweden walked out of the hospital with a \$1,300,000.00 bill for having covid, but I guess nikes are a better metric for you.	positive	false
126018	26.08.2020	Sweden uncovers 3,700 false positives from COVID-19 test kit <a href="https://t.co/pDg5yYMLa9">https://t.co/pDg5yYMLa9</a>	neutral	correct
126282	25.08.2020	As Sweden's COVID-19 Measures Hint At Herd Immunity, US Experts Rethink Lockdown Strategies   Zero Hedge <a href="https://t.co/WLO5ExbpnU">https://t.co/WLO5ExbpnU</a>	neutral	correct



128815	19.08.2020	Covid Disinformation. Sweden is nowhere near herd immunity and has a high level of avoidable deaths per capita. Compare Sweden allowing the virus to spread with New Zealand where Jacinda Ardern's Government moved early with strict Isolation Measures that suppressed the spread. . <a href="https://t.co/paMedBy818">https://t.co/paMedBy818</a>	negative	correct
80800	03.12.2020	Regarding Covid-19 in Sweden: The elderly were forgotten. Not so important. They are going to die soon anyway.	negative	correct
130888	14.08.2020	It is really not a race to see who is the lowest. Deaths with covid aren't the only thing that matter. Sweden has done very well for itself.	positive	correct
83553	24.11.2020	A very good assessment of lockdowns on the economy.. How Finland and Norway Proved Sweden's Approach to COVID-19 Works <a href="https://t.co/JTa6ydD1a1">https://t.co/JTa6ydD1a1</a>	positive	correct
133393	09.08.2020	It's perplexing to me the PHO and journalists aren't investigating the difference in Sweden's covid deaths and all cause death per capita ranking. Could the variance be an indicator of deaths caused by the lockdown	negative	correct
134979	06.08.2020	Correction: Majority of Finland's new corona cases are from Sweden and Balkans (not Baltics).	neutral	correct
2288	09.02.2022	BREAKING: Sweden declares Covid-19 pandemic over and announces end to all remaining restrictions and end to PCR testing <a href="https://t.co/ABfWKPqxqf">https://t.co/ABfWKPqxqf</a>	neutral	correct
137907	31.07.2020	Sweden, Which Never Had Lockdown, Sees COVID-19 Cases Plummet as Rest of Europe Suffers Spike <a href="https://t.co/k5lXa02ndz">https://t.co/k5lXa02ndz</a>	neutral	correct

142693	19.07.2020	You made the claim that Sweden isn't a much healthier nation than the US. The data shows otherwise. It is a separate conversation to discuss the degree to which public health as a whole influences	neutral	correct
143164	18.07.2020	Italy, UK, Sweden all have public healthcare system fully gov funded. All of them failed to stop Corona.	negative	correct
144083	15.07.2020	That is just BS. It is not that simple. There are at least 50 factors deciding how many people die in Covid. The government can influence around 10 of these on the short term. Norway have a lot less old people	negative	false
144654	14.07.2020	Russia's COVID Zealot #1 Changes Tune, Now Sounds Like Sweden's Anders Tegnell - <a href="https://t.co/6KYy8h75Yo">https://t.co/6KYy8h75Yo</a> <a href="https://t.co/MxdgdyisON">https://t.co/MxdgdyisON</a>	neutral	correct
146181	10.07.2020	Several teachers have died of COVID-19 complications in Sweden, where schools did not modify class sizes or make other substantive adjustments.	neutral	correct
147886	08.07.2020	Every country in this world have been affected by the covid-19. Norway (where I live) shut down in mars and it shows that we did the right thing, but the economics will be affected. Sweden did not.	negative	correct
148421	07.07.2020	Impact of COVID-19 Attributable Deaths on Longevity, Premature Mortality and DALY: Estimates of USA, Italy, Sweden and Germany <a href="https://t.co/UUw6nAV9a9">https://t.co/UUw6nAV9a9</a> #medRxiv	neutral	correct

149171	04.07.2020	Wow, is this endcome of #AndersTegnell #coronasweden #strategy? #Sweden is losing it in many front. People die from #COVID__19 and people are lost because they feel like #goverment and #healthOfficials does not care, but #covidDead is only statistics. #koronafi #coronasverige <a href="https://t.co/N7USi26mTu">https://t.co/N7USi26mTu</a>	negative	correct
149626	02.07.2020	Sweden officially set to kick off August 15 - unless COVID-19 situation changes <a href="https://t.co/gwoZweB83L">https://t.co/gwoZweB83L</a> #americanfootball	neutral	correct
150983	27.06.2020	Faith is being lost in the authorities and their COVID strategies. Even Sweden, traditionally high-trust, is now facing doubt for their "hands off" approach to lockdown. #sweden #europe #strategy #trust #hands #hand #lockdown #lost #lose #facing #benow #doubt #approach <a href="https://t.co/SoN5e4pvY1">https://t.co/SoN5e4pvY1</a>	positive	false
153896	16.06.2020	Its an international trend with Covid 19 that theres a "rally around the flag" affect. Similar in Sweden. I dont think it will last though	neutral	correct
156721	04.06.2020	Sweden's Lack of COVID-19 Lockdown Leads to Unnecessary Deaths - <a href="https://t.co/ilnviJXxXE">https://t.co/ilnviJXxXE</a> <a href="https://t.co/OEF0DWLbxQ">https://t.co/OEF0DWLbxQ</a>	negative	correct
157104	04.06.2020	Sweden has more Covid deaths per capita than any country in the world. All so the economy could drop the same as Germany's in the upcoming year: <a href="https://t.co/MiWYambzZh">https://t.co/MiWYambzZh</a>	negative	correct
157143	04.06.2020	Quite generally, and this is where I agree with Tegnell, I find it questionable to reduce the current situation to COVID alone. Sweden has opted for a more holistic approach--I have no idea if it will work, but I	positive	correct

		am very sure that it is too early		
157324	04.06.2020	Sweden took a gamble on COVID. And it lost the bet badly <a href="https://t.co/D5DhVec11N">https://t.co/D5DhVec11N</a>	negative	correct
157328	04.06.2020	And then of course the ones who haven't stood up for anything or anyone in their lives can't stop talking about the covid-19 risk. Or about how this "doesn't concern Sweden" and how it's about "one incident in the US"	negative	correct
158177	03.06.2020	"Sweden's top epidemiologist has admitted his strategy to fight Covid-19 resulted in too many deaths, after persuading his country to avoid a strict lockdown." paraphrase: this confidence in herd immunity got people killed. <a href="https://t.co/7IdFkJrHC">https://t.co/7IdFkJrHC</a>	positive	false
158534	03.06.2020	Trust me, I love Sweden and Swedes. I am just here to correct the terribly wrong narrative that Sweden has chosen a right Corona strategy.	neutral	false
159369	30.05.2020	Do not include in your total death toll the fatalities which doctors have diagnosed as with Covid-19 in the death certificates they have issued. This is the reality in Sweden the "best in the world" - Full article from Doctor Marcello Ferrada de Noli here. <a href="https://t.co/iPTJhCUIsi">https://t.co/iPTJhCUIsi</a>	negative	correct
159434	30.05.2020	Deaths yesterday across Europe from Covid. Spain 2 Italy 87 Germany 24 France 52 Turkey 28 Belgium 42 Sweden 84 Portugal 14 Ireland 6 Poland 13 Romania 13 Hungary 8 Netherlands 28 UK 324 #COVID19	neutral	correct

166105	15.05.2020	except that maths doesn't stack up as asymptomatic people aren't included in the death rate neither are people who don't get it at all. There's no way that maths stacks up! Neil Ferguson's model didn't ring true for Sweden.	negative	correct
170677	06.05.2020	Wits University clinical infectious disease epidemiologist and vaccinologist professor Shabir Mahdi explains why Sweden didn't have a lockdown in its fight against COVID-19. <a href="https://t.co/5KfmEA3nI9">https://t.co/5KfmEA3nI9</a>	negative	false
171070	05.05.2020	Did you know that doctors are forbidden to use CHQ as Corona treatment in Sweden! I went to the doctor yesterday and she just told me we have no treatment for Covid, we let your immune system take care of it.	neutral	correct
180026	21.04.2020	Stockholm-based defence researcher Steven Savage reflects on the pros, cons and unknowns of Sweden's comparatively relaxed approach to the COVID-19 crisis <a href="https://t.co/0uFE8p6KB6">https://t.co/0uFE8p6KB6</a>	negative	false
182187	18.04.2020	OK, so Tegnell claims on April 9th that the daily death numbers are stable. 7-8 days later it is clear that it wasn't true. They were quickly rising. If Tegnell knew on April 9th that Sweden just had the record number of covid-19 deaths on April 8	positive	false
186529	10.04.2020	It all depends in the trust you put in your people #DonaldTrump Force is not always the answer. We the people of Sweden are responsible in fighting #Corona Stop the blame game and let us fight together.	negative	false

186891	09.04.2020	Correlation is not science. Fauci and Birx are not practicing science- but pseudoscience and far-left politics inconsistent with the scientific method. Sweden did not shut down and is fighting COVID well. <a href="https://t.co/wSfac6Cvbb">https://t.co/wSfac6Cvbb</a>	neutral	correct
189940	01.04.2020	Sweden's actions in fighting COVID-19 seem to be getting to closer to our response here in Canada. What you need to know about Sweden's new social distancing guidelines <a href="https://t.co/yYtqAlevmj">https://t.co/yYtqAlevmj</a>	negative	false
191812	25.03.2020	Sweden has the lowest number of hospital beds per capita in Europe and 2nd lowest ICU capacity standing at a total of 550. Yes 550 ICU spaces. There are already 144 ICU cases of COVID-19 in Sweden, yet the Public Health Agency continues to not act #coronavirussweden <a href="https://t.co/ISnhFJuH0l">https://t.co/ISnhFJuH0l</a>	positive	false
191861	25.03.2020	Japan and. Sweden have taken the laid back approach to Covid 19 with decent results. Are we over reacting to a media driven virus?	neutral	correct
192039	24.03.2020	Scanned some Swedish newspapers and beginning to wonder whether Sweden is fucking up the covid+19 crisis, just letting things roll along...	negative	correct
193841	14.03.2020	My lungs are still hurting and I'm still having trouble breathing at times, I want this tested but apparently the part of Sweden I live in has closed down testing of covid-19 on those who aren't deathly sick or those who work in hospitals... <a href="https://t.co/Lz1OQOP5IK">https://t.co/Lz1OQOP5IK</a>	negative	correct