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How Deep was Green? A Close Analysis of Sustainability and Value Orientation in VW Prior to the 2015 Emissions Scandal

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ABSTRACT

This paper discusses sustainability and its application from the business perspective, with a particular focus on Volkswagen, a leading automaker in the world. Given its long history of aligning itself to the sustainability agenda by portraying itself as a sustainable automaker and revelations to the contrary following the 2015 carbon emissions scandal, it makes VW an ideal choice for this study whose broad focus is sustainability in the business world. In this respect, this study looks at sustainability from the holistic perspective of sustainable business management (taking into account corporate social and environmental social obligations besides the traditional economic sustainability inclined to revenue and profit generation) and value orientation in VW prior to the 2015 carbon emissions scandal to understand the depth of the automaker's green agenda. Therefore, the objective of this study is to analyse sustainability and value orientation in Volkswagen prior to the 2015 carbon emissions scandal to understand the depth of the automaker's green agenda.

From the literature review, it is evident that VW's sustainability or green agenda prior to the 2015 carbon emissions scandal was not as deep as portrayed by the automaker. As demonstrated in the Black Sapote Strategy analogy devised by the author, VW intentionally advanced a brown agenda (the use of Brown Agenda should be understood as activities that counter the green agenda and have a negative impact on the environment) which it coated with a thin green layer characterised by deceptive commitments to the sustainability agenda, including self-proclamation as a global environmental leader. These actions by VW violated the principles of sustainability, given that they were focused on destroying social and environmental value which do not only undermine the ability of corporations like VW to generate future products and profits but also the future generations' ability to meet their needs. From the literature review and the analysis thereof, it is evident that the value orientation of Volkswagen prior to the 2015 carbon emissions scandal was hinged on stakeholder's theory, a radical one for that matter, whose interest was to generate revenue and profits for its stakeholders "at all costs".

Questo articolo discute la sostenibilità e la sua applicazione dal punto di vista aziendale, con un focus particolare su Volkswagen, una delle principali case automobilistiche a livello mondiale. Considerata la sua lunga storia di allineamento all'agenda della sostenibilità presentandosi come una casa automobilistica sostenibile VW e le rivelazioni contrarie seguite allo scandalo sulle emissioni di carbonio del 2015, ciò rende VW la scelta ideale per questo studio il cui obiettivo generale è la sostenibilità nel mondo degli affari. A questo proposito, questo studio esamina la sostenibilità dalla prospettiva olistica della

gestione aziendale sostenibile (tenendo conto degli obblighi sociali aziendali e ambientali oltre alla tradizionale sostenibilità economica incline alla generazione di ricavi e profitti) e dell'orientamento al valore in VW prima delle emissioni di carbonio del 2015. scandalo per comprendere la profondità dell'agenda verde della casa automobilistica. Pertanto, l'obiettivo di questo studio è analizzare la sostenibilità e l'orientamento al valore in Volkswagen prima dello scandalo delle emissioni di carbonio del 2015 per comprendere la profondità dell'agenda verde della casa automobilistica. Dall'analisi della letteratura, è evidente che la sostenibilità o l'agenda verde di VW prima dello scandalo delle emissioni di carbonio del 2015 non era così profonda come descritta dalla casa automobilistica. Come dimostrato nell'analogia della Black Sapote Strategy ideata dall'autore, VW ha intenzionalmente promosso un'agenda marrone (l'uso della Brown Agenda dovrebbe essere intesa come attività che contrastano l'agenda verde e hanno un impatto negativo sull'ambiente) che ha rivestito con una sottile Lo strato verde ha caratterizzato gli impegni ingannevoli verso l'agenda della sostenibilità, inclusa l'autoproclamazione come leader ambientale globale. Queste azioni di VW hanno violato i principi di sostenibilità poiché erano mirate a distruggere il valore sociale e ambientale che non solo minano la capacità di aziende come VW di generare prodotti e profitti futuri, ma anche la capacità delle generazioni future di soddisfare i propri bisogni. Dalla revisione della letteratura e dalla sua analisi, è evidente che l'orientamento valoriale di Volkswagen prima dello scandalo delle emissioni di carbonio del 2015 era imperniato sulla teoria degli stakeholder, radicale del resto, il cui interesse era generare entrate e profitti per i propri stakeholder "a tutti i costi".

Keywords: Sustainability, Green Agenda, Brown Agenda, Value Orientation, VW, Emissions Scandal, Shareholder theory, Stakeholder theory.

1 – Introduction

1.1 – *Theoretical background*

Sustainability is a three-faceted conceptual perspective of development that takes into account economic, social, and environmental needs. The fundamental definition of sustainability is drawn from the World Commission on Environment and Development's 1987 "*Our Common Future*" report also referred to as the Brundtland report (DesRoches, 2023; United Nations, 1987; Wilkinson, Hill, & Gollan, 2001; Danciu, 2013). The latter is a specific reference to the Commission's chairperson, Gro Harlem Brundtland (United Nations, 1987). In line with the Brundtland report, sustainability is defined as the ability to meet the present needs without compromising future generations' ability to meet their own needs (DesRoches, 2023; Moldan, Janoušková, & Hák, 2012; Wilkinson, Hill, & Gollan, 2001; Danciu, 2013; Giovannoni, & Fabietti, 2013; Bansal, & DesJardine, 2014). From the business perspective, sustainability refers to doing business without negatively impacting the environment, community, or society as a whole (Spiliakos, 2018). However, as suggested by Haugh and Talwar (2010), on account that corporations or firms are traditionally established to generate revenue and profit, at least from the shareholder theory viewpoint, more than anything else, economic sustainability is fundamental to corporate financial success as a corporate entity cannot survive if expenditure exceeds income. The shareholder theory perspective of sustainability which was coined by Milton Friedman in the 1970s continues to be challenged by more inclusive theories such as the stakeholder theory coined by Edward Freeman in the 1980s (Freeman & McVea, 2005), the triple bottom line (TBL) coined by John Elkington in the late 1990s (Elkington, 2013) and the "Grow the Pie" Concept by Edmans (2021) which all suggest the need for corporations to meet the interests of all stakeholders beyond the shareholders' interests. Although the theories/concepts bring to the business sustainability discourse the aspects of social sustainability and

environmental sustainability, these aspects of sustainability from the business perspective are more pronounced in the TBL by John Elkington as they are addressed in a more integrated way from the business viewpoint through the 3P formulation, 'people, planet and profits (Elkington (2013). The TBL concept strikes a balance between the traditional economic sustainability side of a corporation and the need to address the interests of the people and planet beyond profit, by integrating social sustainability and environmental sustainability. Social sustainability embodies the humanitarian context of business which challenges corporations to address the needs of people, and society/community in which corporations operate. Whereas the latter takes into account the impact of business on the environment and the planet in general. Therefore, it is the responsibility of businesses beyond generating profits to ensure that there are mechanisms in place to reduce the negative impact of their actions on the environment by using natural resources in a way that they last longer and to control the waste with the ultimate goal of preserving the environmental system which includes the life support system so not compromising the ability of the generations to meet their needs (Danciu, 2013).

The past three decades have witnessed a gradual transition of sustainability in the business world from the traditional economic sustainability to a more inclusive perspective of business sustainability which takes into account aspects of social and environmental sustainability. This paradigm shift is reflected by the increase in the application of the sustainability concept from the NGOs world to the business world, especially following the launch of the Paris Agreement in 2015 that calls for collective action toward the global green agenda of attaining net zero by 2050 (United Nations, 2015). This paradigm shift could be attributed to what Danciu (2013) cites as increase in the awareness of sustainability in business world. Over the years Volkswagen has portrayed a sense of awareness of sustainability given its efforts to integrate sustainability into its business operations. Volkswagen started aligning itself with the sustainability agenda way before the Paris Agreement. For instance, prior to the 2015 carbon emissions scandal, which is the period this study is focused on, VW positioned itself not only as a global economic leader but also as a global environmental leader by committing to being a sustainable automaker and eco-friendly company (Blackwelder, Coleman, Colunga-Santoyo, Harrison, & Wozniak, 2016; Sawayda, Reddick, & Yarbrough, 2022). The two historical perspectives of VW, one characterised by the automaker portraying itself as a global environmental leader in the auto industry and the revelation of the dark side in the form of the carbon emission scandal attract research interest to appreciate the polarised and conflicting situation VW found itself from the sustainability and organisation value orientation perspectives. In this respect, the objective of this study is to analyse sustainability and value orientation in Volkswagen prior to the 2015 carbon emissions scandal to understand the depth of the automaker's green agenda.

2 – Research Design and Methodology

The study solely focused on Volkswagen to understand the depth of the automaker's green agenda prior to the 2015 carbon emissions scandal. In this respect, a qualitative case study research design that falls under the broader auspices of the interpretivist/constructivist research paradigm was adopted to meet the study objective. Literature on the subject under study was reviewed and complemented by content analysis. The choice of this methodology was based on its suitability for analysing both printed and electronic material and textual content in general. The researcher has previous experience using this method in other qualitative studies. For instance, in a literature review study on "Where Does the Value of a Corporation Lie?" the

researcher analysed content of searched publications on the subject matter to discuss theories surrounding business management and the perceptions of the proponents and opponents of the theories on the existence and purpose of corporations, to understand where corporations place their value (Chuma & Qutieshat, 2023). The Boolean logic (AND, OR, and NOT) and truncation were employed to particularly focus the literature source search on the study topic and the key theories underpinning the study. For example, the literature research focused on identifying publications on sustainability, VW, and the emissions scandal. In this case, the literature search strategy was sensitive to keywords to enable identifying literature more relevant to the study topic. Using Boolean logic, the following literature search combinations were used: VW AND Emission Scandal; "Sustainability"; Sustainability OR Sustainable Development; "Shareholder theory"; "Stakeholder theory", among others. This approach served as a criterion for including and excluding literature in the study. Guided by the purpose of the study, the researcher perused over 100 publications and settled on 37 publications that were more relevant to the study topic as the source of literature for this study.

3 – Historical Perspective Background of VW

VW as a corporate entity was founded in 1937 in Berlin under the name of Gesellschaft zur Vorbereitung des Deutschen Volkswagens mbH (Company for the Preparation of the German Volkswagen Ltd.) which later in 1938 was renamed Volkswagenwerk GmbH (Grieger, Gutzmann, & Schlinkert, 2008). As reflected in its name, a German compound term made up of *volks* and *wagen* meaning people and car respectively, from its inception, Volkswagen was positioned as the people's car (Grieger & Gutzmann, 2015). Over the years, VW has grown from strength to strength, becoming not only a leading car manufacturing company in the world but also one of the top 10 world's largest 500 corporations by revenue (Fortune Global 500, 2022). While undoubtably, VW has fulfilled its financial obligations, as evidenced by its rankings on the Fortune 500, it carries a dismal record in meeting its environmental obligations, given that it has been ranked as a leading contributor to global warming in the automobile industry accounting for 582 million tons of CO₂ emissions (Stephan, Lee, & Kim, 2019).

VW's first incident of carbon emission scandals was in 1973 when it was first fined by the United States for employing defeat devices in some of its cars (Goel, 2015). Regardless of this penalty, this act of environmental violation continued over the years and the latest scandal was in 2015 when VW was issued with a notice of violation by the U.S. Environmental Protection Agency (EPA) after it was established that the company's vehicles emitted 40 times above the permissible levels of dangerous gases as set by EPA standards (Sawayda, Reddick & Yarbrough, 2022). This came to the fore after VW diesel vehicles met carbon emission standards when tested in indoor lab environments but failed the same assessment when tested outside of the lab environment. This was a calculated mission by VW considering it outsourced Bosch to manufacture an emission detection defeat device to elude excess carbon emission detection by environmental regulatory authorities (Aurand et al, 2018). It is suggested that this illusive strategy is a product of the VW executives' management meeting held in November 2006 to get around any federal emissions requirements for diesel vehicles (Welch, 2019). VW's confession of having fitted some of its cars with a carbon emission detection defeat device, suggests that the violation of environmental obligations by the automobile company was an intentional act, not one made out of ignorance.

4 – Sustainability in VW Prior to the Emissions Scandal

Prior to the 2015 carbon emissions scandal, VW did not only position itself as a sustainable automaker, an eco-friendly company (Blackwelder, Coleman, Colunga-Santoyo, Harrison, & Wozniak, 2016; Sawayda, Reddick, & Yarbrough, 2022) but it was also perceived so, given the automaker's high sustainability ranking on Dow Jones Sustainability Indices (Majláth & Ricordel, 2021) and having been a recipient of several sustainability awards, among them, a Green Car of the Year award in 2009 from Green Car Journal (Poier, 2020) and Ethics in Business Award from World Forum for Ethics in Business in 2012 for its leadership in Corporate Social Responsibility (World Forum for Ethics in Business, 2015). VW's efforts to position itself as a sustainable automaker prior to the 2015 emissions scandal are reflected in the automaker's strategy 2018 devised in 2007, aimed at transforming the company into a global economic and environmental leader, and a world leader in customer satisfaction and quality by 2018 (Blackwelder, Coleman, Colunga-Santoyo, Harrison, & Wozniak, 2016). However, this dream was aborted in 2015 following the emissions scandal and replaced by the Together Strategy 2025 aimed at transforming the automaker into a global leader in manufacturing pure-electric automobiles and autonomous driving and battery technology (Welch, 2019). This move was primarily envisaged to take the company beyond the negative impact of the emissions scandal and help rebuild the brand's credibility (ibid). In achieving the foregoing strategy aspirations, the automaker set a target of establishing 16 new electric vehicle plants by 2025 out of which 9 were targeted for 2020.

From the practical side, VW became the first car manufacturer to adopt ISO 14001 principles, international environmental principles that act as standards for global firms, including the adoption of several sustainability goals in 2002 and investing in vehicles that would reduce carbon emissions early, including electric and diesel vehicles (Sawayda, Reddick, & Yarbrough, 2022). Although the automaker has continued to command global leadership on the economic front, given its Fortune 500 ratings as the top 10 largest corporations and largest automaker by revenue (Fortune Global 500, 2022), the realisation of the automaker's aspiration of becoming a global environmental leader by 2018 suffered serious setbacks in 2015 following the carbon emission scandal, as this seems to suggest that the automaker used the strategy to greenwash and disguise its environmental bad practices.

In 2005 VW decided to stop selling diesel vehicles in the US on account that it would not meet the emission limits in America, but it returned to the American market three years later with diesel models it presented as eco-friendly (Poier, 2020). However, this was proven otherwise, following the emission scandal in 2015. A critical analysis of the automaker's decision in 2005 to stop selling diesel cars, its return in 2009 with the purported clean diesel models, and the emission scandal in 2015 following its confession of installing an emission detection defeat device in its diesel cars, gives an indication that the automaker might have continued violating environmental obligations in other markets where carbon emission detection mechanisms are either weak or are not as rigorous as America's. One would therefore, conclude that even if VW had an environmental strategy in place, this was just on paper and was used as a greenwashing tool to market itself as an environmentally friendly organisation contrary to its actions. This puts to question VW's sustainability agenda prior to the emissions scandal, and triggers questions like, how deep was green exhibited in VW's sustainability? Based on the 2015 emissions scandal, this researcher describes VW's sustainability strategy as Black Sapote Strategy. VW used this strategy for forty years as a greenwashing tool to present an eco-friendly

corporate image (Plungis, 2015). This in some way answers the question of how deep was green in VW's sustainability. Black Sapote is a fruit native to Mexico, which is green outside and brown inside (Pino, Ortiz-Vazquez, Sauri-Duch, & Cuevas-Glory, 2014). The black sapote fruit is characterised by a thin green outermost layer encasing a brown inner thick flesh. It is from this background that this researcher devised the black sapote strategy to describe VW's deceptive actions to portray itself as an environmentally conscious corporate entity (see Figure 1 below). Like the Black Sapote fruit, from the outside, VW presented itself as a green company when in the actual sense it was brown inside. The green image portrayed by the automaker was as deep as the thin green skin of the black sapote fruit, while the hidden brown agenda was as deep as the thick and pulpy core of the black sapote fruit to nourish the corporate pecuniary interest. Figure 1 below presents cross-sectional view of the black sapote fruit portraying VW's illusive green agenda.

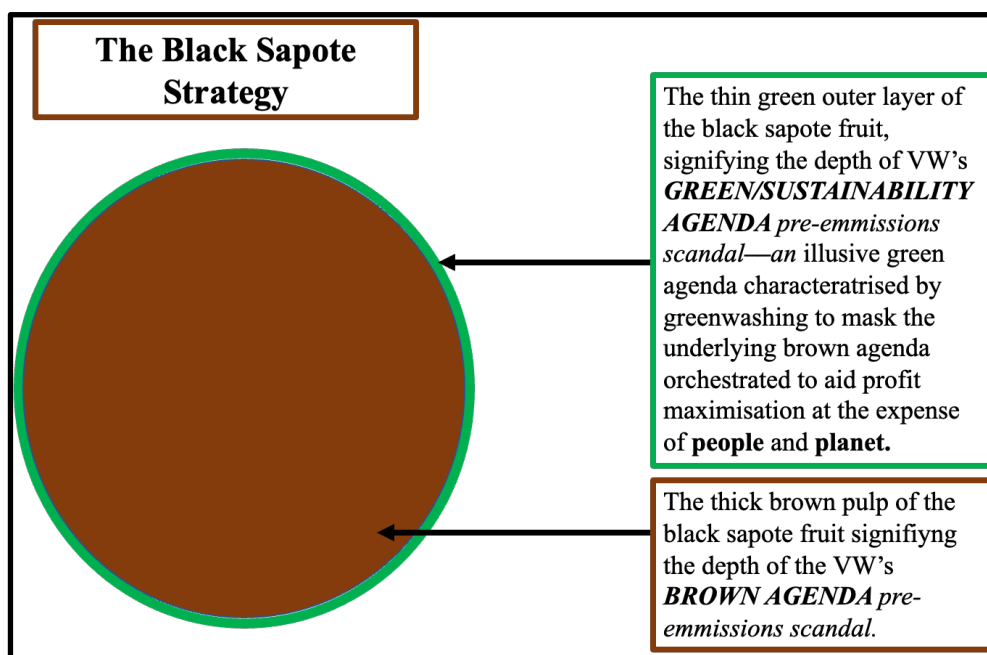


Fig. 1 – The Black Sapote Strategy (Note. A Depiction of VW's Illusive Green Agenda Prior to 2015 Emissions Scandal. Source: Created by the researcher).

In 2015 net-zero was originated through the 5th Assessment Report of the Intergovernmental Panel on Climate Change and the United Nations Framework Convention on Climate Change (UNFCCC) Structured Expert Dialogue which culminated in Article 4 of the 2015 Paris Agreement to encourage stakeholders around the world to work towards net zero emissions and a climate neutral world (Allen et al, 2022). Net zero was set to be achieved through climate neutrality requiring entities to institute measures to balance emissions so they are equal to (or less than) the emissions that get removed through the planet's natural absorption. Conversely, at that time, VW was found to have instituted measures that countered the net zero agenda as the defeat device prevented the relevant authorities from detecting impermissible levels of carbon emissions from VW's diesel models.

From the inside, as revealed by the 2015 emissions scandal, VW invested in and advanced the brown agenda to fulfill its financial obligation at the peril of other stakeholders. Carbon emissions constitute part of greenhouse gases that are not only harmful to the environment but

to humans as well. Mikhaylov, Moiseev, Aleshin, and Burkhardt, (2020) confirm the harmful effect by suggesting that its attribution to global warming, greenhouse gas emissions is viewed as the cause of adversities such as infectious and non-infectious diseases, negative effects on nutrition, water security, and other social disruptions. This demonstrates the potential negative impact of unsustainable corporate practices on social and environmental value. Elkington (2013) calls corporations like VW “corporate locusts” that destroy social and environmental value which does not only undermine corporations’ ability to generate future products and profits but the future generations’ ability to meet their needs.

5 Review of VW’s Organisational Value Orientation Prior to the Emissions Scandal

At the centre of the value orientation of an organisation are shareholder and stakeholder theories. The former suggests that the primary purpose of a corporation or business is to generate revenue and profits for its owners, in this case, shareholders (Ferrero, Hoffman & McNulty, 2014; Cheffins, 2021). Whereas the latter suggests that the purpose of a corporation is not serving the interests of the shareholders but serving the interests of all its stakeholders (Phillips, Barney, Freeman, & Harrison, 2019). Against this theoretical background, this section reviews the organisational value orientation of VW prior to the emissions scandal. From the strategy 2018, VW positions itself as an organisation that aspired to become a global economic and environmental leader, and the best automaker in the world by 2018, implying that besides pursuing profits, it also was concerned about the effects of its business operations on the environment (Blackwelder, Coleman, Colunga-Santoyo, Harrison, & Wozniak, 2016). However, the revelation of malpractices following the 2015 emission scandal and similar cheating incidences in preceding years, suggest that VW placed much value on meeting its financial obligations, even at the cost the other stakeholders, as demonstrated by its deliberate actions to conceal the carbon emissions in its diesel cars. This value orientation is aligned with the shareholder theory which is inclined towards revenue generation and profit maximisation in the interest of shareholders (Ferrero, Hoffman & McNulty, 2014). In this respect, as suggested by Chuma & Qutieshat (2023), from the shareholder theory perspective, value is measured based on the share price, dividends, and economic profit.

As suggested by Vega (2017) the company culture has been characterised by cheating and deceit from top management to subordinates. Sawayda, Reddick, and Yarbrough (2022) echo this shortcoming by suggesting that VW’s organisational culture lacked ethical practices prior to the scandal. The 2015 emissions scandal and similar cases committed in the preceding years suggest that VW did not walk the environmental and social responsibility talk portrayed in its sustainability strategy (Valentini & Kruckeberg, 2018). Furthermore, anchored on the foundational ethos of building a people’s car, through its strategy 2018, VW pledged to deliver value to its consumers. However, this social obligation was violated, given that, VW failed to provide consumers with accurate information to inform their purchasing decisions (Sawayda, Reddick, & Yarbrough, 2022). On account of this shortcoming, VW customers felt betrayed, because they purchased the VW cars believing that they were good for the environment (ibid) and delivered quality in line with the promised customer value proposition contained in the strategy 2018 (Blackwelder, Coleman, Colunga-Santoyo, Harrison, & Wozniak, 2016).

VW’s organisation value orientation did not seem to have been in alignment with its sustainability aspirations, nor the proclamations of its senior management, especially the

suggestion by Martin Winterkorn CEO of Volkswagen between 2007 and 2015 that business meant more than just technical aspects like horsepower and torque as the powerful value drivers were sustainability, environmental protection and social responsibility (Raj, 2017). The remarks made by Martin Winterkorn appeared to have been for public relations, especially after taking responsibility for the transgression and stepping down in 2015 (Lang, 2015). VW seems to have used greenwashing to disguise its value for profits to the detriment of all other stakeholders. Raj (2017) confirms this assertion by suggesting that VW profited over sustainability because, in a bid to overcome competition, the automaker cheated its way to gaining market share for its cars manufactured across the world under the guise of sustainability.

6 Conclusion

From the literature review, it is evident that VW's sustainability or green agenda prior to the 2015 carbon emissions scandal was not as deep as portrayed by the automaker through its strategies and policies. As demonstrated in the Black Sapote Strategy analogy devised by the author, VW intentionally advanced a brown agenda which it coated with a thin green layer characterised by deceptive commitments to the sustainability agenda, including self-proclamation as a global environmental leader. These actions by VW violated the principles of sustainability given that they were focused on destroying social and environmental value which do not only undermine the ability of corporations like VW to generate future products and profits but also the future generations' ability to meet their needs. From the literature review and the analysis thereof, although on the face of it, the automaker seems to have aligned itself with the green agenda, at least from its proclamations and commitments to the green agenda, it is evident that the value orientation of Volkswagen prior to the 2015 carbon emissions scandal was hinged on the shareholder theory, a radical one for that matter, whose interest was to generate revenue and profits for its stakeholders at all costs. The variance between VW's sustainability-aligned value proposition and contra-sustainability actions like the carbon emissions scandal does not only demonstrate the propensity of corporate entities to engage in greenwashing but also suggests the intricacy of the application of sustainability in the corporate world which requires close monitoring as well as devising stringent regulations by responsible authorities. Further, the well-calculated inverted sustainability agenda driven by value orientation anchored on profit maximisation advanced by VW prior to the revelation of the carbon emissions scandal in 2015 gives enough reason for one to suppose that the automaker was resolved to pursue the greenwashing path had the cheating scheme not been revealed. In the same vein, VW's unsustainable practices suggest that corporate entities advancing a green agenda should not be taken at their word, at least not at face value.

6.1 – *Implication for Future Research and Study Limitation*

The outcome of this study clearly demonstrates that it is one thing to make commitments and proclamations but is another thing to fulfil them. It is also clear that they are hidden agendas associated with these sustainability commitments and proclamations, mainly a profiteering agenda that benefits the business and its owners at the expense of other stakeholders. In this respect, future research needs to focus on assessing the extent corporate entities live up to their commitments and proclamations, in particular VW, given that post 2015 emissions scandal, in an effort to redeem itself, it has devised strategies that are pro-sustainability and the green agenda as evidenced by its commitment to creating lasting values, offer good working

conditions, and conserve resources and the environment (Volkswagen Group, n.d). This is critical in ensuring that corporate entities are held to account.

This study used literature that was easily accessible and free of cost. In this regard, the researcher used Google Scholar, a search engine that permits free and easy access to scholarly publications that are available online to identify and access scholarly publications relevant to the study topic. Therefore, the literature used in the study is limited to publications largely sourced using the Google Scholar search engine. Further, the fact that the reviewed literature was published in English, this by itself presents a limitation, as there is a possibility of availability of publications on the subject matter in other languages that could have been valuable to study.

7 References

- Allen, M. R., Friedlingstein, P., Girardin, C. A., Jenkins, S., Malhi, Y., Mitchell-Larson, E., ... & Rajamani, L. (2022). Net zero: science, origins, and implications. *Annual Review of Environment and Resources*, 47, 849-887. Retrieved from <https://www.annualreviews.org/doi/pdf/10.1146/annurev-environ-112320-105050>.
- Aurand, T. W., Finley, W., Krishnan, V., Sullivan, U. Y., Abresch, J., Bowen, J., Rackauskas, M., Thomas, R., & Willkomm, J. (2018). The VW Diesel Scandal: A Case of Corporate Commissioned Greenwashing. *Journal of Organizational Psychology*, 18(1). Retrieved from http://t.www.na-businesspress.com/JOP/JOP18-1/AurandTW_18_1.pdf.
- Bansal, P., & DesJardine, M. R. (2014). Business sustainability: It is about time. *Strategic organization*, 12(1), 70-78. Retrieved from <https://journals.sagepub.com/doi/epub/10.1177/1476127013520265>.
- Blackwelder, B., Coleman, K., Colunga-Santoyo, S., Harrison, J. S., & Wozniak, D. (2016). The Volkswagen Scandal. Case Study. *University of Richmond: Robins School of Business*. Retrieved July, 26, 2018. Retrieved from <https://scholarship.richmond.edu/cgi/viewcontent.cgi?article=1016&context=robins-case-network>.
- Cheffins, B. R. (2021). Stop Blaming Milton Friedman! *Washington University Law Review*, 98(1), 1607-1644. Retrieved from https://openscholarship.wustl.edu/cgi/viewcontent.cgi?article=6540&context=law_lawreview
- Chuma, C., & Qutieshat, A. (2023). Where Does the Value of a Corporation Lie? A Literature Review. *Economia Aziendale Online*, 14(1), 15-32. Retrieved from <http://193.204.40.129/index.php/ea/article/download/2168/2325>.
- Danciu, V. (2013). The sustainable company: new challenges and strategies for more sustainability. *Theoretical and Applied Economics*, 20(9), 7-26. Retrieved from <https://store.ectap.ro/articole/898.pdf>.
- DesRoches, C. T. (2023). The Concept of Sustainability. In Byron Williston (ed.), *Environmental Ethics for Canadians* (pp. 385-390). New York, NY, USA: Oxford University Press.
- Edmans, A. (2021). *Grow the Pie: How Great Companies Deliver Both Purpose and Profit—Updated and Revised*. Cambridge: Cambridge University Press.
- Elkington, J. (2013). Enter the Triple Bottom Line. In A. Henriques & J. Richardson (Eds), *The Triple Bottom Line: Does It All Add Up? Assessing the Sustainability of Business and CSR* (1st Ed., pp. 1–16). Retrieved from <https://www.johnelkington.com/archive/TBL-elkington-chapter.pdf>.
- Ferrero, I., Michael Hoffman, W., & McNulty, R. E. (2014). Must Milton Friedman embrace stakeholder theory? *Business and Society Review*, 119(1), 37-59. Retrieved from <https://core.ac.uk/download/pdf/83589658.pdf>.
- Fortune Global 500. (2022). Fortune Global 500. Retrieved from <https://fortune.com/global500/>.

- Freeman, R. E., & McVea, J. (2005). A stakeholder approach to strategic management. *SSRN Electronic Journal*, 1-32. Retrieved from https://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID263511_code010316590.pdf?abstractid=263511&mirid=1.
- Giovannoni, E., & Fabietti, G. (2013). What is sustainability? A review of the concept and its applications. *Integrated reporting: Concepts and cases that redefine corporate accountability*, 21-40. Retrieved from <https://are.berkeley.edu/courses/ARE298/Readings/goodland.pdf>.
- Goel, A. (2015). Volkswagen: the protagonist in diesel emission scandal. *South Asian Journal of Marketing & Management Research ISSN*, 5(11), 32-40. Retrieved from <https://www.academia.edu/download/40879302/ARTICLE.pdf>.
- Grieger, M., & Gutzmann, U. (2015). *From the Beetle to a Global Player-Volkswagen Chronicle*. Volkswagen Aktiengesellschaft, Corporate History Department. Retrieved from https://www.volkswagenag.com/presence/konzern/documents/history/englisch/Heft9_EN.pdf.
- Grieger, M., Gutzmann, U., & Schlinkert, D. (2008). Volkswagen chronicle. Becoming a Global Player. *Historical Notes*, 7. Retrieved from https://www.volkswagenag.com/presence/konzern/documents/history/englisch/Heft7_EN.pdf.
- Lang, G. F. (2015). VW's dieselgate-Loss of engineering integrity; a poor excuse for economic insanity. *Sound and Vibration*, 5-6. Retrieved from <http://www.sandv.com/downloads/1510lang.pdf>.
- Majláth, M., & Ricordel, P. (2021). European Motor Vehicle Manufacturers' CSR Trends–The Effect of the Emission Scandal. *Acta Polytechnica Hungarica*, 18(11), 29-48. Retrieved from http://acta.uni-obuda.hu/Majlath_Ricordel_118.pdf.
- Mikhaylov, A., Moiseev, N., Aleshin, K., & Burkhardt, T. (2020). Global climate change and greenhouse effect. *Entrepreneurship and Sustainability Issues*, 7(4), 2897. Retrieved from https://www.researchgate.net/profile/Alexey-Mikhaylov/publication/342372335_Global_climate_change_and_greenhouse_effect/links/5f576af2299bf13a31ab136c/Global-climate-change-and-greenhouse-effect.pdf
- Moldan, B., Janoušková, S., & Hák, T. (2012). How to understand and measure environmental sustainability: Indicators and targets. *Ecological indicators*, 17, 4-13. Retrieved from https://www.researchgate.net/profile/Pravat-Acharjee/post/What_is_the_suitable_measurement_for_Environmental_Sustainability/attachment/5dc25400cfe4a777d4edd59b/AS%3A822105260167168%401573016576901/download/moldan2012.pdf.
- Phillips, R.A., Barney, J.B., Freeman, R. E., & Harrison, J.S. (2019) "Stakeholder Theory." Harrison, J.S., Barney, J.B., Freeman, R.E., & Phillips, R.A. (Eds), *The Cambridge Handbook of Stakeholder Theory* (pp. 1-16). Oxford: Oxford University Press, 2019. Retrieved from <https://scholarship.richmond.edu/cgi/viewcontent.cgi?article=1105&context=managementfaculty-publications>.
- Pino, J. A., Ortiz-Vazquez, E., Sauri-Duch, E., & Cuevas-Glory, L. (2014). Characterization of aroma-active compounds in black sapote (*Diospyros digyna* Jacq.). *Acta Alimentaria*, 43(4), 547-552. Retrieved from <http://real.mtak.hu/49884/1/aalim.2013.0004.pdf>.
- Plungis, J. (2015). Volkswagen emissions scandal: Forty years of greenwashing-the well-travelled road taken by VW. *The Independent*. Retrieved from <https://www.independent.co.uk/news/business/analysis-and-features/volkswagen-emissions-scandal-forty-years-of-greenwashing-the-welltravelled-road-taken-by-vw-10516209.html>.

- Poier, S. (2020). Clean and Green—The Volkswagen Emissions Scandal: Failure of Corporate Governance?. *Problemy Ekorozwoju*, 15(2), 33-39. Retrieved from <https://bibliotekanauki.pl/articles/370987.pdf>.
- Raj, A. S. (2017). The Volkswagen Way, Profits over Sustainability. *Journal of Marketing Vistas*, 7(2), 50-59. Retrieved from [https://www.ipeindia.org/wp-content/uploads/journals/jmv/IPE_JoMV_\(V7,%20N2,%20Jul-Dec%202017\)_29%20Mar_18.pdf#page=56](https://www.ipeindia.org/wp-content/uploads/journals/jmv/IPE_JoMV_(V7,%20N2,%20Jul-Dec%202017)_29%20Mar_18.pdf#page=56).
- Sawayda, J., Reddick, K., & Yarbrough, C. (2022). Volkswagen Cleans Up Reputation After Emissions Scandal. Retrieved from <https://harbert.auburn.edu/binaries/documents/center-for-ethical-organizational-cultures/cases/vw.pdf>.
- Spiliakos, A. (2018). What Does "Sustainability" Mean in Business? Harvard Business School. Retrieved from <https://online.hbs.edu/blog/post/what-is-sustainability-in-business>.
- Stephan, B., Lee, I., & Kim, J. (2019). Crashing the Climate: How the Car Industry Is Driving the Climate Crisis. Retrieved from https://www.greenpeace.de/sites/www.greenpeace.de/files/publications/gp_cleanairnow_carindustryreport_full_v5_0919_72ppi_0.pdf.
- United Nations. (1987). Report of the World Commission on Environment and Development.
- United Nations. (2015). Paris Agreement. Retrieved from https://unfccc.int/sites/default/files/english_paris_agreement.pdf.
- Valentini, C., & Kruckeberg, D. (2018). "Walking the environmental responsibility talk" in the automobile industry: An ethics case study of the Volkswagen environmental scandal. *Corporate Communications: An International Journal*. Retrieved from <https://www.academia.edu/download/74823439/cc8171feb5c029dff1405726fca4f798b04.pdf>.
- Vega, G. (2017). Volkswagen: Business as Usual. *Business and Professional Ethics Journal*. Retrieved from https://www.researchgate.net/profile/Gina-Vega-2/publication/319612913_Volkswagen_in_advance_Business_as_Usual/links/5b291e230f7e9b1d003592cc/Volkswagen-in-advance-Business-as-Usual.pdf.
- Volkswagen Group. (n.d.). Sustainability. Retrieved from <https://www.volkswagenag.com/en/sustainability.html>.
- Welch, J. (2019). The Volkswagen recovery: leaving scandal in the dust. *Journal of Business Strategy*. Retrieved from https://www.researchgate.net/profile/James-Welch-4/publication/330527604_The_Volkswagen_recovery_leaving_scandal_in_the_dust/links/5c5ddf2192851c48a9c33c91/The-Volkswagen-recovery-leaving-scandal-in-the-dust.pdf.
- Wilkinson, A., Hill, M., & Gollan, P. (2001). The sustainability debate. *International Journal of Operations & Production Management*, 21(12), 1492-1502. Retrieved from https://www.researchgate.net/profile/Adrian-Wilkinson-2/publication/291775411_Sustainability_Special_Issue/links/58f05f87a6fdcc11e569de41/Sustainability-Special-Issue.pdf.
- World Forum for Ethics in Business. (2015). Ethics in Business Awards. World Forum for Ethics in Business International Leadership Symposium. Retrieved from <https://wfeb.org/ethics-in-business-awards/>.