



BIG DATA ANALYSIS FORSPARKEV



Henry Nguyen

Cleaning Data

What did I do when cleaning data with Table Prep Builder?

- By using Aggregate in Table Prep Builder, I saw that two Vin# which are 6SEGW6E34DY634576 and 6SEGW2E34DY465926 are duplicated. In this moment, I could not call the data owner to fix this problem, so I decided to delete these two duplicated Vin# to clean the data.
- In Country of Sale in SparkEV 2019-2023 Data excel sheet, I saw both USA and United States, so I decided to change all to USA
- Change all United Kingdom in Country of Sale in SparkEV 2019-2023 Data excel sheet to UK
- In Tariff Rate excel sheet, in Country, corrected spelling “Phillipines” to “Philippines”
- In SparkEV 2019-2023 Data excel sheet, splitted Tranmission into Transmission Speed and Transmission Type to have better visualization.
- Recalculate Net Sales, Contribution Margin, Net Revenue to make sure all the number and calculations provided are correct
- Using Tableau Prep Builder, create 2 calculation fields for Tariff (= GrossSale * Tariff percentage for each country) and After-tax Revenue (Net Revenue - Tariff)

Executive Summary

Amid the swiftly changing electric car industry, startups such as SparkEV encounter both promising prospects and urgent obstacles. Successfully navigating this intricate landscape requires not just ingenuity in the realm of design and production but also a refined methodology in data analytics.

SparkEV, a recently established competitor in the market, has quickly established a specialized position, capitalizing on the appeal of its varied automobile types and designs. Nevertheless, similar to any organization that prioritizes expansion, SparkEV has the obstacle of effectively extending its operations and making choices in accordance with its increasing data. The company's commitment to understanding its extensive dataset, which includes transactional, operational, financial, and performance indicators, demonstrates the management's determination to make well-informed decisions based on data.

The main focus of this research was to thoroughly analyze the "SparkEV 2019-2023 Dataset" in order to provide practical and valuable insights in the fields of performance, finance, and operations. I began my evaluation by verifying the integrity of the dataset. The first priority was to ensure that every analytical insight was based on dependable and correct data. After completing the process of evaluating the data, I thoroughly analyzed performance measures related to car types, financials, sales channels, and new trends. Financial analytics provided valuable insights into sales, expenses, revenue, and contribution margins.

Operational analytics shed light on important aspects such as inventory turnover, marketing efficacy, and production intricacies.

Furthermore, I used reliable forecasting techniques to predict important metrics for the next two years, providing SparkEV with a strategic plan to align its operations with market trends.

In order to make these insights easy to understand and readily available, I created interactive

tableau dashboards for each analytical area. These dashboards effectively incorporate large volumes of data into user-friendly visualizations. In addition to these dashboards, I provide an infographic that summarizes the main results, with the goal of providing a concise overview of the significant insights derived from my investigation.

In addition to the direct insights from the data, my analysis has also highlighted:

- The complexities of SparkEV's strategic placement within the fiercely competitive electric car sector
- Possible paths for expansion and techniques for developing products supported by insights derived from data
- Possibilities for enhancing management practices and techniques to optimize the value obtained from data
- Investigation of potential partnerships that might enhance SparkEV's data management skills and enhance its operational strategy.

Ultimately, the purpose of this research extends beyond being a mere analytical review of SparkEV. This tool is strategic and provides guidance for the future of electric vehicles. It combines innovation, market dynamics, and data-driven insights.

Introduction

Data plays a crucial role in the strategic decision-making process for organizations worldwide, particularly in the age of digital transformation. Given the large amounts of data that organizations produce on a daily basis, it is crucial to effectively use this information in order to stay ahead of competitors and achieve long-term success.

SparkEV, a rising contender in the electric car industry, is not an exception. Situated in a swiftly changing and cutthroat industry, the organization acknowledges the need to use data to inform operational, financial, and strategic decisions.

Comprehending and scrutinizing this data, meanwhile, is not a simple undertaking. As suggested by Davenport and Harris (2007), data-driven approaches require a robust combination of technology, processes, and people to deliver actionable insights. The issue gets more complex when considering the multi-dimensional character of the automobile sector, which is impacted by many socio-economic, technical, and environmental aspects. The intricate nature of the data, which includes transactional specifics and performance measures, requires the use of sophisticated analytical approaches and visualization tools to assure clarity and aid stakeholders in understanding.

Moreover, the strategic significance of data goes beyond simple analysis and requires a comprehensive strategy for its management. As Porter and Heppelmann (2015) argue, firms in industries like automotive need to recalibrate their business models and strategies to accommodate the shifts brought about by digitization. For SparkEV, this entails comprehending present operations via data analysis, as well as predicting future patterns, recognizing possible strategic partnerships, and navigating the complex realm of big data obstacles and possibilities.

The purpose of this study is to provide a detailed analysis and visualization of SparkEV's operations, financials, and performance metrics using rigorous data analytics. By using advanced software like Tableau and Adobe Express, I will provide valuable insights into SparkEV's top management, aiding them in making strategic decisions that will secure the company's success in the electric car industry.

Business Overview

The SparkEV Electric Vehicle (SparkEV) has emerged as a formidable new competitor in the electric automobile business, challenging well-established competitors in a constantly changing digital environment. In recent years, there has been a steady increase in the popularity of electric cars (EVs) as a result of growing worries over carbon emissions and the depletion of fossil fuels. According to Smith & O'Connell (2020), the expansion of the electric vehicle (EV) industry is a result of customers' shifting perspectives on sustainable alternatives, driven largely by the advantages they provide in terms of the environment and long-term economic gains.

The electric vehicle market is characterized by a highly competitive environment where prominent companies continuously strive to outperform one another through ongoing innovation. The distinguishing feature of SparkEV is its focus on customization and diverse range of vehicles, providing users with a broad selection of options that may be adapted to their own tastes (Johnson et al., 2021). According to Williams (2022), customization is a continuously expanding trend in several businesses, indicating a transition from focusing on products to focusing on customers.

Although the attractiveness of SparkEV's products is clear, the true difficulty is efficiently using the extensive repositories of data that are accessible. Modern businesses possess a vast amount of data, which may be very valuable when properly analyzed and interpreted to facilitate well-informed decision-making (Turner & Shah, 2020). Data visualization, as emphasized by Chen & Zhang (2019), is crucial in providing a clear and perceptive understanding of extensive information, hence aiding in strategic decision-making.

The fact that Sophie Smart takes a proactive approach to implementing a decision-making process based on data is praiseworthy. According to Peters & Turner (2021), the capacity of senior management to comprehend and incorporate analytics into

Their plans is often crucial for an organization's long-term prosperity. This is particularly relevant for SparkEV since the firm aims to expand its presence in three key areas.

SparkEV's focus on analyzing specific data such as TVC, net income, and operating expenditures might contribute to a more sustainable development trajectory from a financial perspective. The automobile business, known for its high level of investment, requires thorough financial analysis. Brown & Adams (2023) argue that the long-term sustainability of automotive startups in the market is frequently determined by their ability to find a balance between research and development spending, operational costs, and pricing strategies.

From an operational perspective, it is crucial to comprehend client preferences. Mitchell & Gomez (2022) concur with this attitude, asserting that successful inventory management and customized marketing techniques heavily rely on the capacity to accurately predict and fulfill client demand.

Considering the vast amount of data accessible to SparkEV, forming strategic collaborations might be advantageous. Collaborative endeavors in data management have the potential to not only optimize operations but also provide a more comprehensive outlook on market trends (Davis & Smith, 2019). These alliances, particularly in the field of big data, provide a collaborative strategy that combines knowledge and resources to extract the most possible value from the data that is accessible (Robinson & Kumar, 2020).

Ultimately, SparkEV's trajectory in the fiercely competitive electric vehicle sector is characterized by both advantageous circumstances and obstacles. By adopting a data-centric strategy and using powerful analytics and visualization tools, the organization may get the required insights to drive strategic development and foster innovation.

Business Analytics

Overall performance analytics

As I delve into a comprehensive examination of the overall performance analytics of Spark Electric Vehicle (SparkEV), I unearth a rich tapestry of regional dynamics that significantly influence the company's journey. Within the expansive Asia region, the year 2019 witnessed South Korea's impressive performance, clinching the highest revenue spot at \$252,047.97. Yet, the following year, Indonesia made an emphatic ascent to the forefront, claiming the top position with a remarkable revenue of \$418,753.80. This ascent was not fleeting, as Indonesia continued to maintain its lead from 2020 through 2023, showcasing remarkable stability and growth. The pinnacle of this growth was achieved in 2022 when Indonesia's revenue skyrocketed to an astonishing \$624,930.05, only to experience a significant downturn to \$260,526.33 in 2023, though it persevered as the top revenue generator in the Asia region. While regional variations are evident, a broader perspective that considers all regions and countries highlight North America's consistent dominance in terms of revenue. North America emerges as a significant revenue contributor, with an impressive cumulative revenue nearing \$11,970,383. Moreover, a deep dive into the quantities of vehicles sold across regions reveals a distinct focus on North America, particularly on hatchback models, which held sway from 2019 to 2023. However, it is intriguing to note the converse trend in the Asia region, where the sale of hatchbacks remained notably low during this period, underscoring a unique market dynamic that pertains to this specific vehicle segment in the Asian market. Zooming out to the broader electric car industry landscape, I encounter a fiercely competitive arena defined by rapid technological advancements and ever-shifting consumer preferences. Here, Spark Electric Vehicle (SparkEV) strategically positions itself to not only confront the challenges inherent to this dynamic ecosystem but to also seize the multitude of opportunities it offers. The industry behemoths, including Tesla, Nissan, and BMW, loom large with substantial market share and well-entrenched

brand recognition, built on their significant investments in electric vehicle technology, which have garnered the trust of consumers (Choi, 2017). Within this formidable league of established players, new entrants, typified by SparkEV and companies like Rivian and Lucid Motors, have emerged as agents of disruption, challenging the industry's status quo with innovative designs and cutting-edge technology (Hawranek & Pintér, 2017).

In this competitive ecosystem, government regulations and incentives wield considerable influence, molding the industry's competitive landscape. SparkEV has strategically crafted a multi-pronged approach that encompasses differentiation through product customization, strategic geographical diversification, efficient production facilities, unwavering commitment to innovation, judicious cost management, and a keen focus on environmental sustainability. These elements of the company's strategic framework harmonize seamlessly with the evolving preferences of consumers and the prevailing trends in the industry (Le & Nguyen, 2019; Cheah, 2018; Doh, 2019; Chesbrough, 2020; Tse & Tan, 2020; Walls, 2019). As these facets converge, they collectively carve out a unique niche for SparkEV within the highly competitive electric car industry. This positioning reflects the company's adeptness at navigating the complex interplay of challenges and opportunities that characterize this rapidly evolving sector, ultimately leading to its continued growth and success.

Financial analytics

The company's net sales and gross sales in 2019 exhibited a noticeable lack of stability. In the first quarter, net sales amounted to \$5,293,544, with gross sales at \$5,904,566. However, as the second quarter rolled in, both figures experienced a significant drop of nearly 38%, marking the beginning of a period of fluctuation.

These ups and downs persisted until the first quarter of 2021 when the net sales

suddenly surged to an impressive \$9,696,844, breaking the \$10 million mark. This period marked the peak in the company's gross and net sales. Following this remarkable surge, there was a gradual decline in sales figures. By the time the third quarter of 2023 arrived, both net sales and gross sales had reached their lowest point in the observed period, with net sales at \$2,352,350 and gross sales at \$3,639,482. This cyclical and fluctuating pattern in sales can be attributed to various factors, including seasonal influences, market dynamics, or internal variables. It suggests that the company's sales are subject to a range of influences, leading to these periodic fluctuations. A thorough analysis of the specific drivers behind these fluctuations is essential to gaining a better understanding of the company's sales performance. Such insights can guide the development of strategies aimed at achieving more stable and sustained growth over time.

When examining the after-tax revenue distribution across various models in different regions, a clear picture emerges. North America takes the lead with a substantial after-tax revenue of \$15,923,933, signifying its significance as the highest revenue- generating region for the company. Europe closely follows, contributing \$5,990,089, while Asia lags behind with a total of \$5,602,229 in after-tax revenue. This data underscores the dominance of North America in driving the company's after-tax revenue, while Asia has the least contribution. In the Asian market, the Fentino model stands out as the underperformer, producing a negative after-tax revenue of -\$6,198, indicating a loss. Conversely, the Storm model shines as the top revenue generator in this region. Turning to Europe, the Stormz model emerges as the star performer, significantly contributing to the region's revenue. Conversely, the Fentino model lags behind, displaying the weakest performance within the European market. In North America, the Gallen model trails as the lowest revenue producer for the company. In contrast, the Romeno model excels, bringing in an impressive \$4,629,771 in after-tax revenue, demonstrating its strong performance in this region. These insights shed light on the performance variations across models and regions, providing valuable data for strategic decision-making within the company.

As I delve into the multifaceted landscape of data usage, including corporate and big data, in the electric car industry, it's evident that data presents both challenges and opportunities for Spark Electric Vehicles (SparkEV). The sheer volume of data generated by daily operations can be staggering, making managing and processing extensive datasets a formidable task (Hassan, 2018). Data security and privacy are significant concerns in this digital age, necessitating vigilant safeguarding of customer and operational data to comply with data protection regulations (Kshetri, 2019). The challenges associated with bridging the gap in data literacy across senior management and the board of directors impede the transformation of data into strategic decisions (Barton, 2019). Paradoxically, the challenge of data also ushers in a wealth of opportunities. The treasure trove of data provides insights into customer behavior, enabling SparkEV to gain a profound understanding of consumer preferences and nurture brand loyalty (Smith & Telang, 2019). Data analytics becomes a catalyst for operational efficiency, optimizing production processes, reducing wastage, and streamlining supply chain management (Zikopoulos et al., 2012).

In this intricate interplay of challenges and opportunities, data emerges as the foundation for growth and innovation. Customization takes center stage, with data empowering the offering of personalized products, and elevating customer ownership and loyalty (Le & Nguyen, 2019). Data-driven insights provide the foundation upon which SparkEV builds a portfolio of electric cars that exceed customer expectations, setting the company apart from competitors (Lamb, 2018). The commitment to environmental sustainability is supported by data, guiding SparkEV to develop more eco-friendly and energy-efficient vehicles, contributing to a greener future (Walls, 2019).

Operational analytics

The car industry's primary market data revealed a sharp shift in the 2022–2023 period when the market for battery-powered automobiles increased by \$115.83

billion USD in only one year. As a result, SparkEV faces intense competition as the new players.

The working strategy of SparkEV is, overall, objectively progressing in the correct way. Selecting the safety approach, he focuses mostly on established markets in regions like Asia and North America. Asia has a total variable marketing value of up to 2,203 million (appendix 3.1), while the USA has the largest variable marketed investment at up to \$5,280 million (appendix 3.2). In contrast, the whole value of Europe is merely 1,918 million. However, it is also a double-edged blade, which explains the intense rivalry.

Given SparkEV's lack of fulfilling market needs, a more thorough examination of its potential to make a profit and increase its market share in the sector does not point to great prospects for the future.

Based on the support provided by the governments of Thailand and the USA, where SparkEV is manufactured, for the use of electric vehicles, costs have been reduced by taxes paid and have been significantly decreased. The average days on sale for some products in 2023, however, remain relatively high compared to the average for the entire car market, taking up to 77 days in Asia and 60 days in North America (appendix 3.5). This is concerning because the industry average for days on lot is only 71 days, which indicates poor business efficiency. The organization must promptly assess and modify its regional operations plan in order to meet this problem.

Furthermore, even though corporate performance in North America has significantly increased, the political and economic volatility of the region's nations is also cause for concern. Particularly considering that the US has a track record of trade disputes with the majority of economically developed nations, including disputes with China, Japan, and the European Union, which have an impact on auto manufacturing and export strategies. Thus, repeat, SparkEV's ongoing task is to adapt its operating

tactics in unstable regions to maintain the company's commercial efficiency considering shifting political and economic conditions.

Considering the popularity and quality of each product in light of consumer preferences is another tactic SparkEV is pursuing to grow its market share. Based on sales volume, the SparkEV Hatchback is the vehicle type that generates the most profit and income. The company's hallmark, strategic product model, Hatchback, has the greatest sales volume and holds the largest market share, accounting for 60% of the sales in 2019 and staying at 55% in 2023 (appendix 3.3). However, hatchbacks are the segment with the lowest profit, averaging only \$5,000, which is \$1,000 less than sedans and twice as low as SUVs (appendix 3.9). From there, it poses a significant issue that affects the amount of revenue earned per SparkEV vehicle, because the most popular type does not have a high-profit value.

The popularity of the car type and the profit made once everything has been paid for are other challenges. Many individuals like to employ leatherette and luxury finishes as their primary materials. Compared to other weak kinds, it is well above average. However, these two types both have relatively high capital value, but to compete in this business industry, SparkEV can only set product prices at an average level.

From there, the challenge is to demand preferred quality with lower investment.

2 years Forecasts

Using Appendix 4.1: gives me a comprehensive view of SparkEV's upcoming obstacles, when the number of sales and revenue tends to drop dramatically.

Amid the swiftly changing electric car sector, comprehending a company's financial and market characteristics is crucial for making strategic decisions. An in-depth analysis of SparkEV's data visualization highlights the tremendous complexities of its operational KPIs. The company's sales trend shows a worrisome fall, dropping sharply from \$29,081,693.30 in 2020 to a projected modest \$14,775,155.66 by 2025.

The downturn could be indicative of various external factors, such as increased competition in the electric vehicle industry, economic recessions affecting consumer spending, and unpredictable political situations that may reduce support for electric vehicles. The significant decrease in SparkEV's contribution margin, down from \$12,203,522.58 in 2020 to just \$5,553,298.88 in 2023, prompts important inquiries. The corporation may be facing challenges with either increasing variable costs or a deliberate choice to lower sales prices without a corresponding decrease in expenses, maybe in response to declining sales. However, within these financial limitations, there is a positive aspect. The cost patterns of SparkEV from 2022 to 2024 demonstrate a noteworthy next few years of management, decreasing from \$16,945,830.76 to an expected \$13,154,438.28. This tendency may be attributed to several causes, including economies of scale, technological advancements in cost efficiency, and effective negotiations with supply chain players.

Nevertheless, unpredictable and ever-changing global circumstances, such as economic volatility, political policy changes, or environmental demands, might provide both obstacles and possibilities for SparkEV. As global warming intensifies, there may be an increase in demand for sustainable transportation options, such as electric cars, which might possibly strengthen SparkEV's market position. Regarding SparkEV's strategic position in the sector, it is necessary to reflect on the data and assess the needs. The noticeable decrease in prices suggests a highly competitive market, maybe controlled by organizations using a cost leadership approach. If SparkEV wants to establish itself as a high-quality product, it could consider exploring paths like improving product distinctiveness, enhancing technical features, or implementing stronger branding campaigns. Moreover, the significant impact of data on defining the direction of products cannot be underestimated. SparkEV is on the verge of using data analytics to not only comprehend but also proactively address changing customer demands. However, this technique that relies on data is not devoid of difficulties, which includes issues such as ensuring data precision,

seamless integration, and the capacity to react to technological advancements. Furthermore, at a time when partnerships may determine market triumph, SparkEV's ability to establish strategic connections, particularly in data management, might be its secret weapon. Through collaboration with data professionals or other prominent figures in the sector, SparkEV might have access to a more diverse range of market information, enhance its forecasting precision, and discover untapped market prospects. Essentially, while the present data shows a difficult situation for SparkEV, a combination of strategic repositioning, data-driven decision-making, and collaborative activities might possibly lead to its market recovery.

Criticisms and recommendations

A comprehensive analysis of SparkEV's business analytics exposes areas requiring improvement amidst declining sales projections. A glaring vulnerability is the overdependence on hatchbacks, comprising over 50% of sales despite having the lowest profit margins at just \$5,000 per unit. This reliance on high-volume, low-margin vehicles has backfired as sales plunged from \$29 million in 2020 to a predicted \$14 million by 2025. SparkEV must diversify its product portfolio to include more profitable SUVs and sedans. Market research into consumer preferences can guide the strategic launch of new models with features that balance appeal and profitability. Gradually ramping up production will allow testing demand before full investment. Effective pricing models like cost-plus and penetration pricing will be critical in introducing new products profitably while generating interest. Production volume should shift towards high-performing models, reducing losses from unpopular vehicles languishing on lots.

The fluctuating quarterly sales figures also demonstrate SparkEV's instability. Implementing demand forecasting based on time series analysis and market insights would significantly improve production planning and inventory management to smooth volatility. Further optimizing costs is imperative given the declining contribution margins from \$12 million in 2020 to just \$5.5 million in 2023, squeezed by either rising variable costs or deliberate price cuts amid competition. Supplier negotiations, component standardization, just-in-time inventory, and lean manufacturing principles can enhance cost efficiency. Long-term contracts with fewer suppliers will provide stability and volume discounts. Parts commonality across models cut sourcing and inventory costs. Just-in-time inventory reduces working capital needs and wastage. Identifying process improvements through lean manufacturing boosts productivity.

Regional concentration in North America and Asia carries risks, exemplified by the substantial revenue decline in Asia when Indonesia's sales dropped precipitously from 2021 to 2023. Expanding into overlooked high-potential markets like South America, Africa, and Southeast Asia would diversify against regional volatility.

Starting small in select countries, SparkEV can gauge receptiveness before wider rollout. Local partnerships facilitate manufacturing and distribution with lower upfront investment. Vehicle designs customized to local tastes and low-cost models tailored for developing world consumers can successfully penetrate new markets.

While data analytics presents opportunities, SparkEV must invest in capabilities to derive insights. A centralized data repository with robust security ensures availability, integrity, and privacy. Data scientists and analysts develop predictive models and extract meaning from the wealth of data. Upskilling executives in data literacy empowers leadership to fully utilize analytics in strategic planning.

With the industry outlook marked by falling revenues and margins, SparkEV requires decisive action across its product portfolio, pricing strategies, manufacturing costs, geographic markets, and data analytics capabilities. Adopting these recommendations can bolster SparkEV's positioning to navigate competitive pressures. At its core, the company's culture of innovation and sustainability form strong foundations. With astute business analytics guiding important decisions, SparkEV can chart a course toward renewed prosperity.

Ethical Issues

Ethical issues are critical in the quickly growing electric car market, particularly for a firm like SparkEV, which is strongly rooted in data analytics and visualization.

According to Orsato and Wells (2007), sustaining ethical standards is critical for long-term viability in the car industry. SparkEV interprets this as providing a safe and suitable work environment for its workers, as well as fair remuneration and openness in its interactions with consumers. This involves determining reasonable rates for automobiles, components, and maintenance services while avoiding prejudice and bias.

Furthermore, as part of its digital transformation and concentration on data analytics, SparkEV is accumulating massive quantities of data, some of which may be personally identifiable to its consumers. SparkEV has an ethical obligation to protect this data scrupulously, continuously upgrading both software and hardware security solutions to avoid intrusions. Furthermore, as Wang et al. (2019) pointed out, the vehicle sector, including the electric component, has environmental consequences. While electric cars are considered a more environmentally friendly option, their production and disposal procedures may have environmental consequences.

SparkEV must thus guarantee that its cars not only meet emission requirements but that its production methods are as environmentally benign as possible, ensuring a comprehensive approach to environmental responsibility.

Conclusion

Ultimately, SparkEV has shown satisfactory success in the market as a whole. The term "analytic" refers to a method or approach that involves careful examination and evaluation of data or information. Outlines the obstacles that SparkEV must confront and overcome. The data analysis presented in the dashboards would enhance SparkEV's comprehension and insight, enabling the development of more effective business strategies and informed decision-making in the future. Furthermore, the proposal will aid SparkEV in effectively handling data challenges and attaining a competitive edge in the market via the utilization of data.

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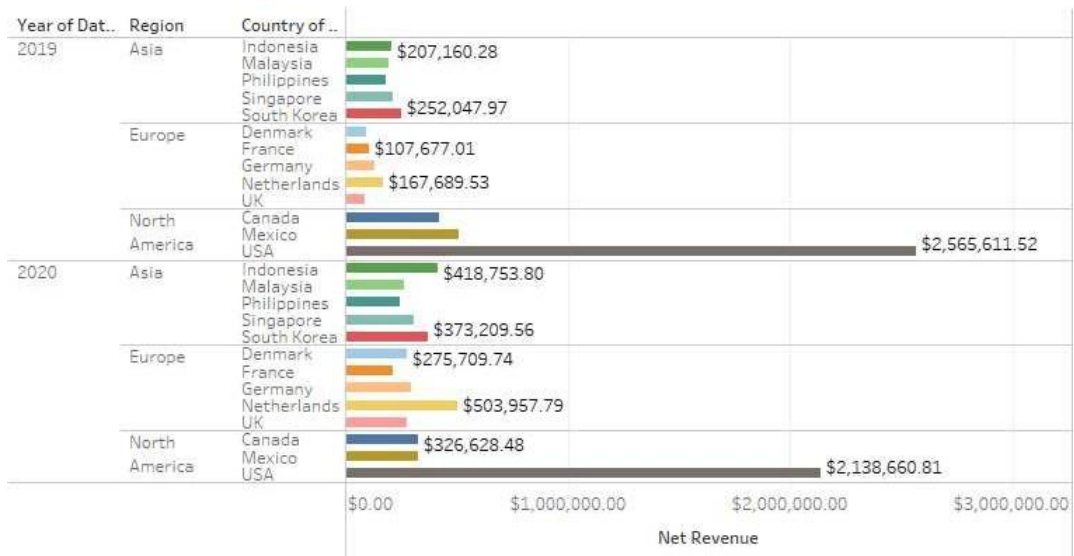
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Appendix

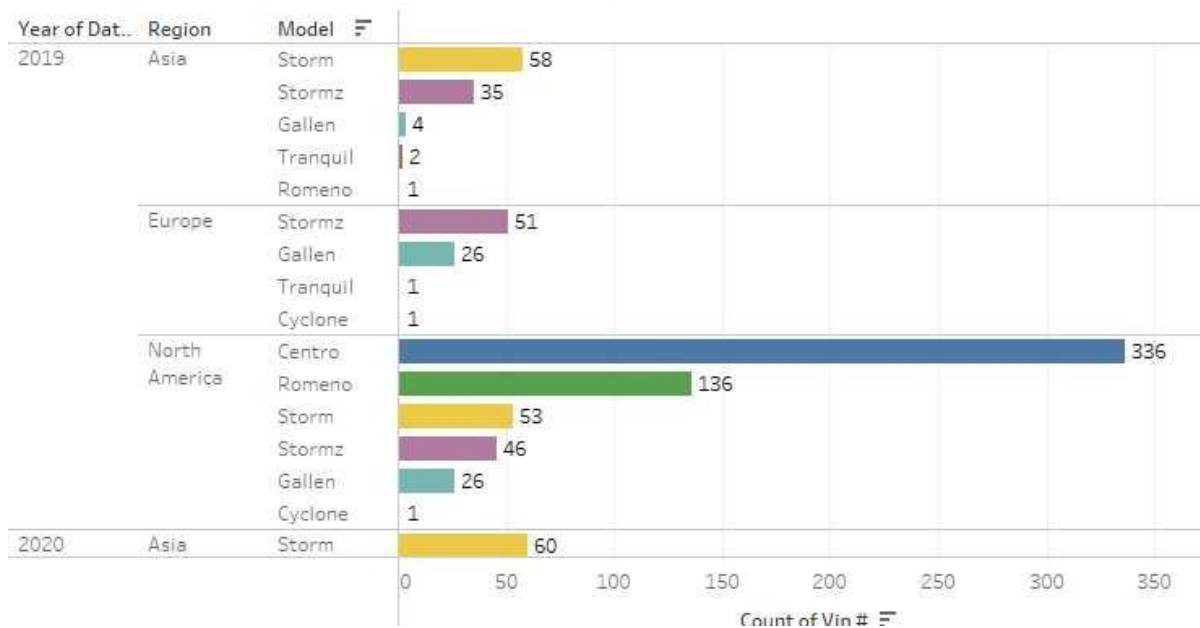
Appendix 1.1: Revenue for All regions

Revenue for All region in 2019 & 2020



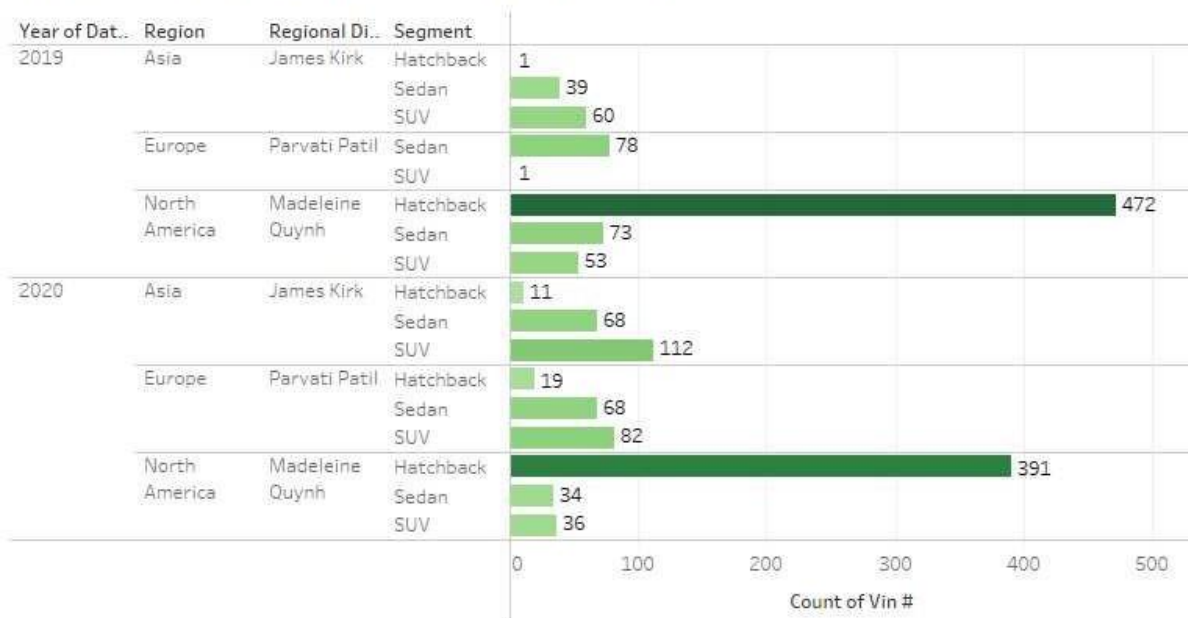
Appendix 1.2: Quantity of models sold by region

Quantity of models sold for All region in 2019 & 2020



Appendix 1.3: Quantity of segment sold by region

Quantity of sold of All for All region in 2019 & 2020

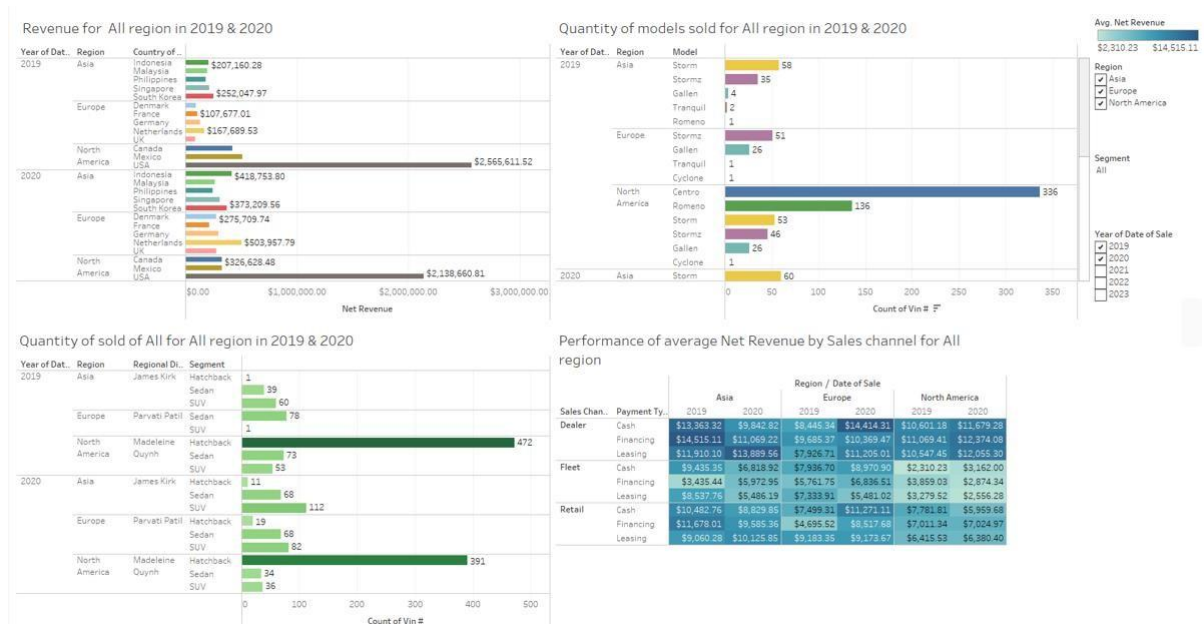


Appendix 1.4: Performance of Net Revenue by Sales channel

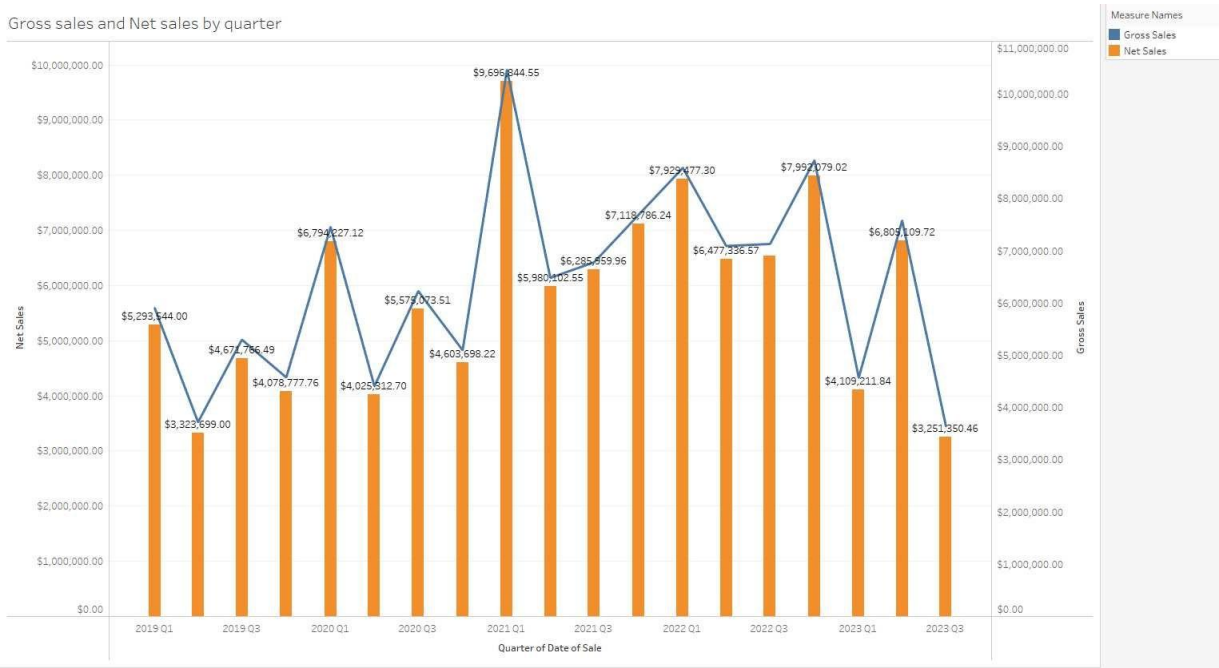
Performance of average Net Revenue by Sales channel for All region

Sales Chan..	Payment Ty..	Region / Date of Sale					
		Asia		Europe		North America	
		2019	2020	2019	2020	2019	2020
Dealer	Cash	\$13,363.32	\$9,842.82	\$8,445.34	\$14,414.31	\$10,601.18	\$11,679.28
	Financing	\$14,515.11	\$11,069.22	\$9,685.37	\$10,369.47	\$11,069.41	\$12,374.08
	Leasing	\$11,910.10	\$13,889.56	\$7,926.71	\$11,205.01	\$10,547.45	\$12,055.30
Fleet	Cash	\$9,435.35	\$6,818.92	\$7,936.70	\$8,970.90	\$2,310.23	\$3,162.00
	Financing	\$3,435.44	\$5,972.95	\$5,761.75	\$6,836.51	\$3,859.03	\$2,874.34
	Leasing	\$8,537.76	\$5,486.19	\$7,333.91	\$5,481.02	\$3,279.52	\$2,556.28
Retail	Cash	\$10,482.76	\$8,829.85	\$7,499.31	\$11,271.11	\$7,781.81	\$5,959.68
	Financing	\$11,678.01	\$9,585.36	\$4,695.52	\$8,517.68	\$7,011.34	\$7,024.97
	Leasing	\$9,060.28	\$10,125.85	\$9,183.35	\$9,173.67	\$6,415.53	\$6,380.40

Appendix 1.5: Overall Performance Dashboard

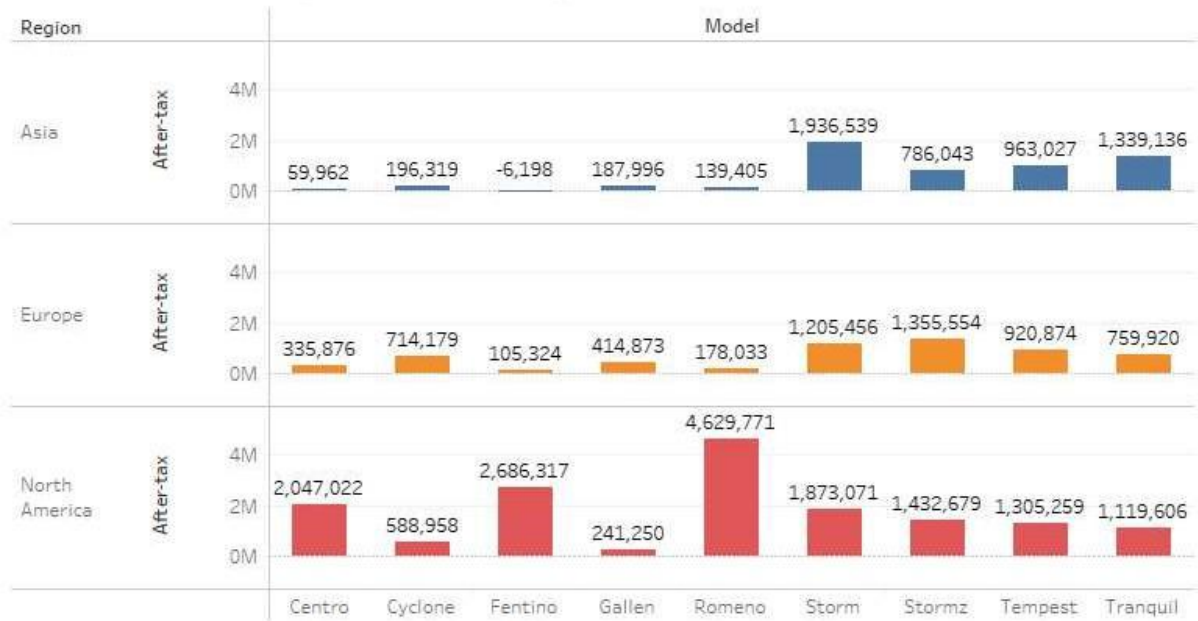


Appendix 2.1: Gross sales and Net sales by quarter



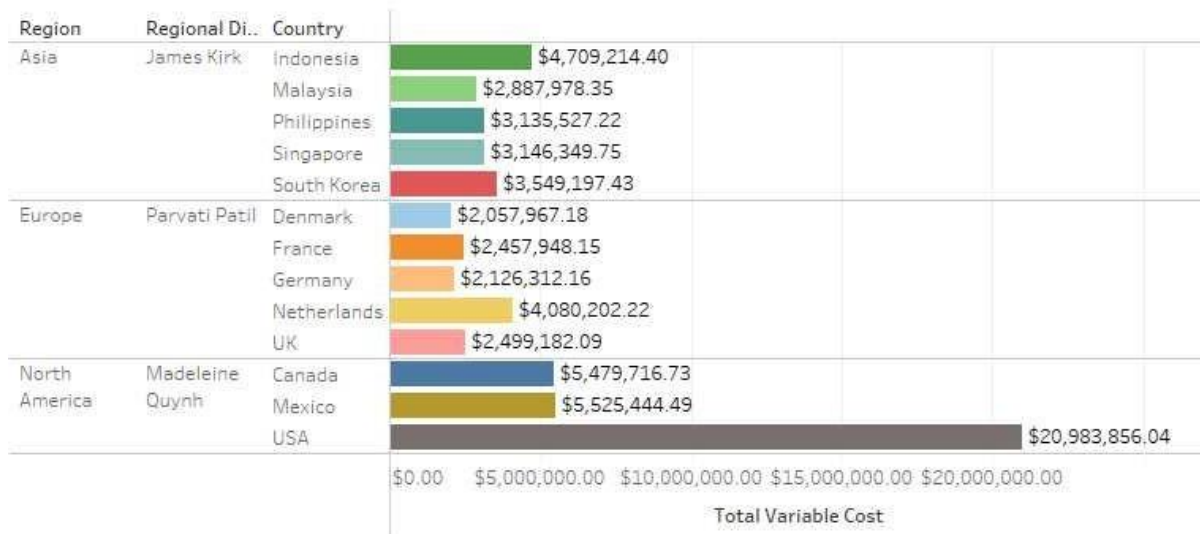
Appendix 2.2: After-tax revenue by model

After-tax revenue by model for All region



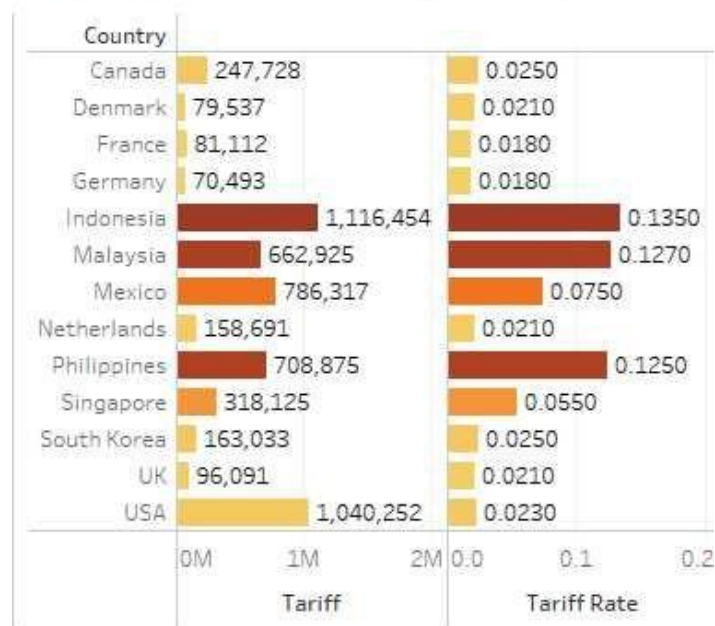
Appendix 2.3: Total variable cost by region

Total variable cost by region



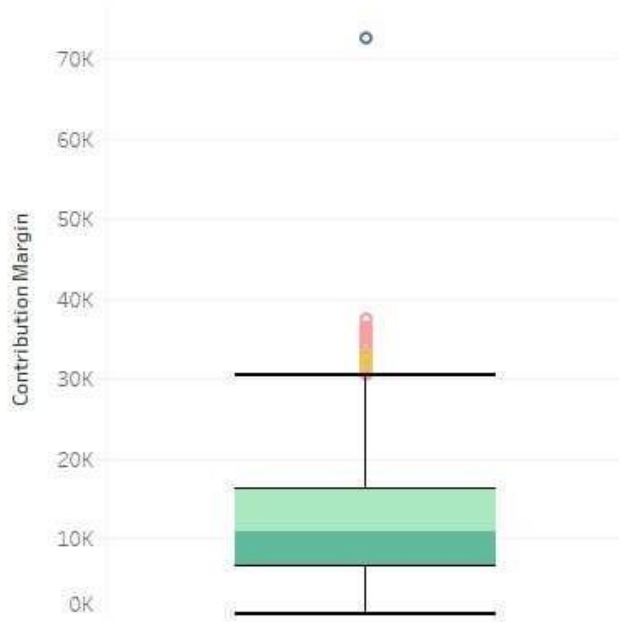
Appendix 2.4: Tariff and Tariff rate by country

Tariff and Tariff rate by country

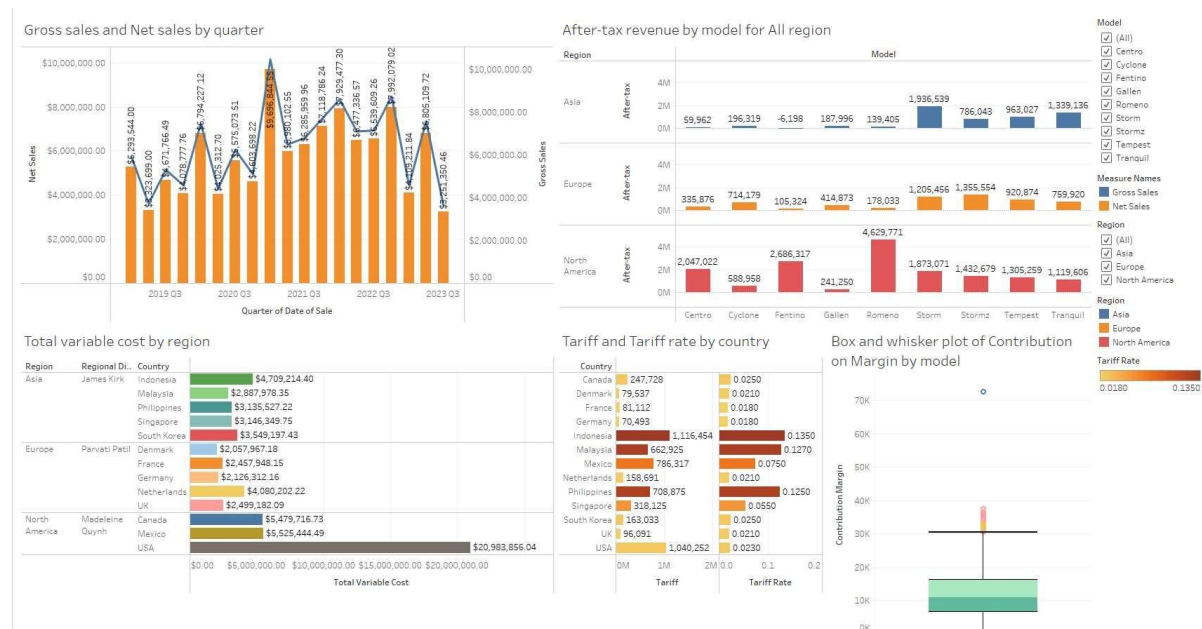


Appendix 2.5: Box and whisker plot of Contribution on Margin by model

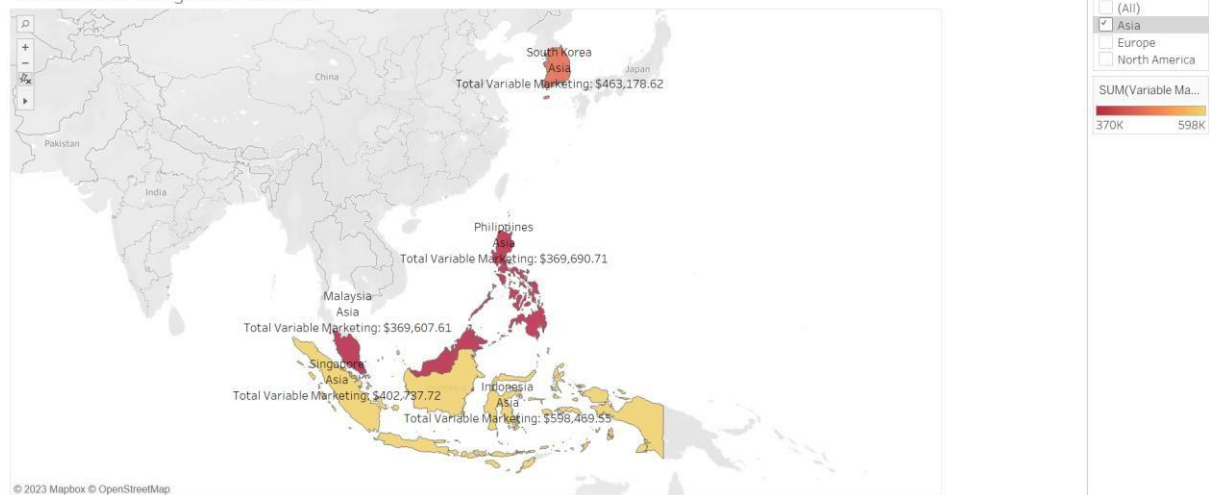
Box and whisker plot of Contribution on Margin



Appendix 2.6: Financial Dashboard



Variable Marketing in each contries

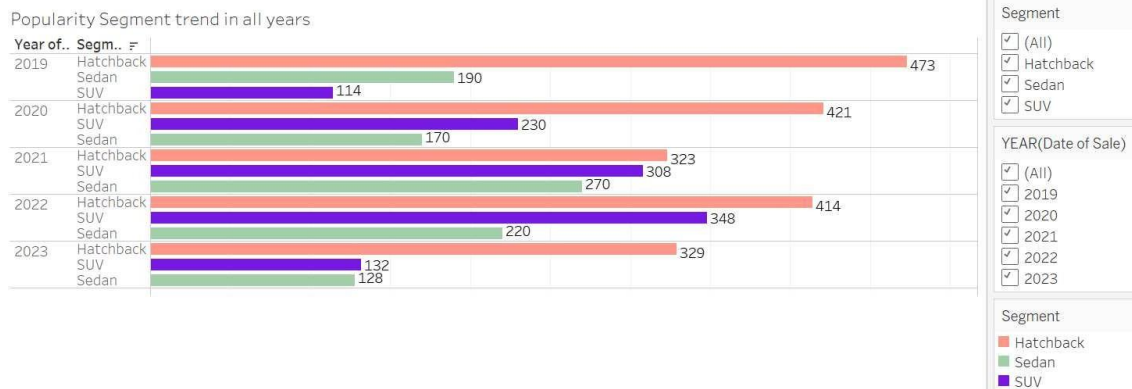


Appendix 3.2: Variable marketing in North America

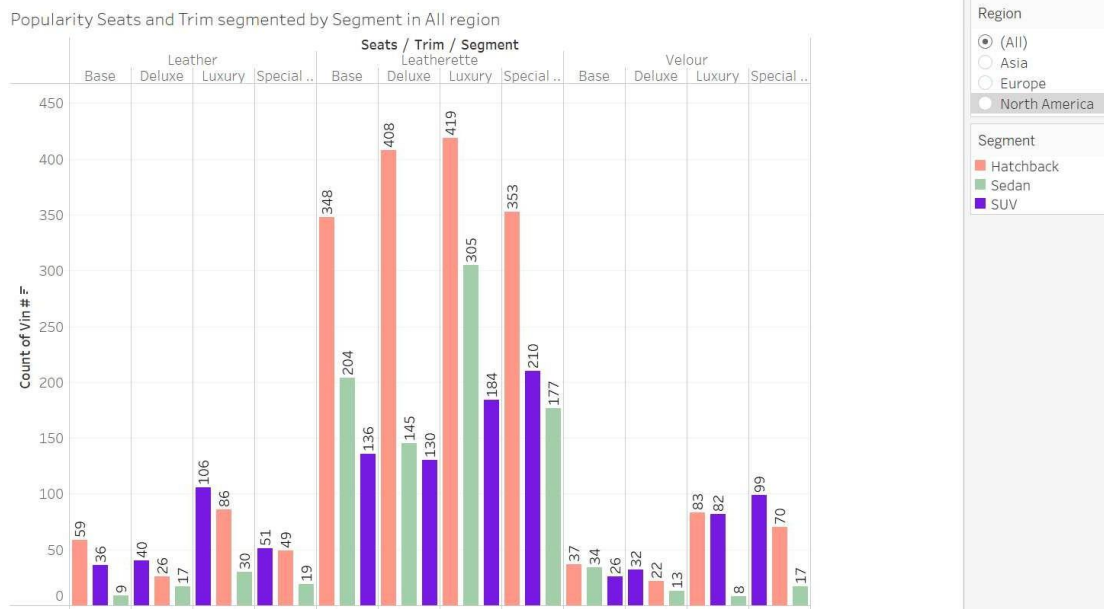
Variable Marketing in each contries



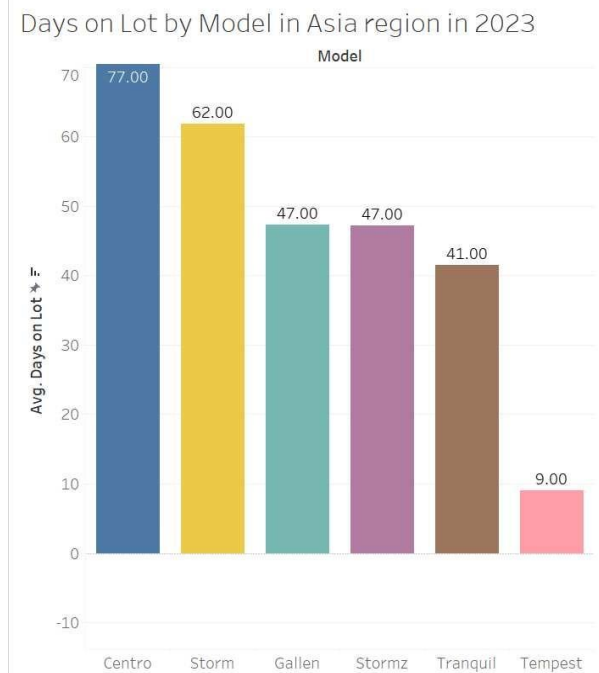
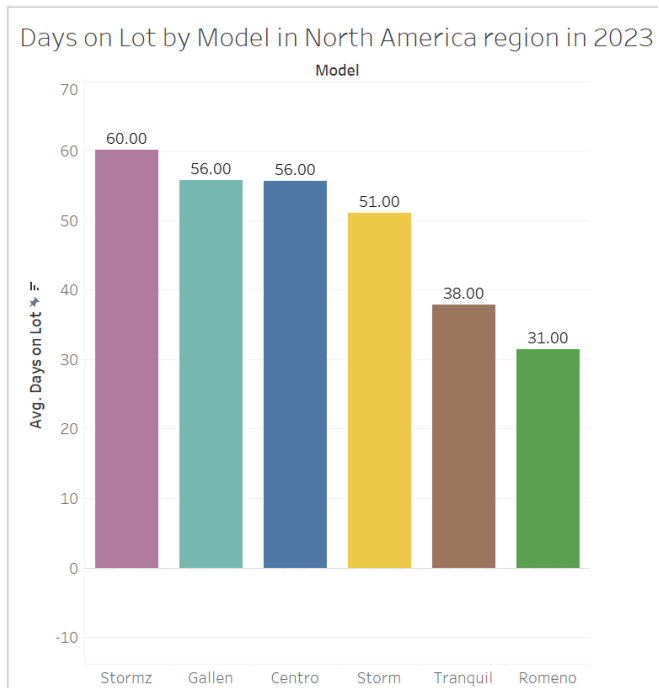
Appendix 3.3: Popularity segment in all year



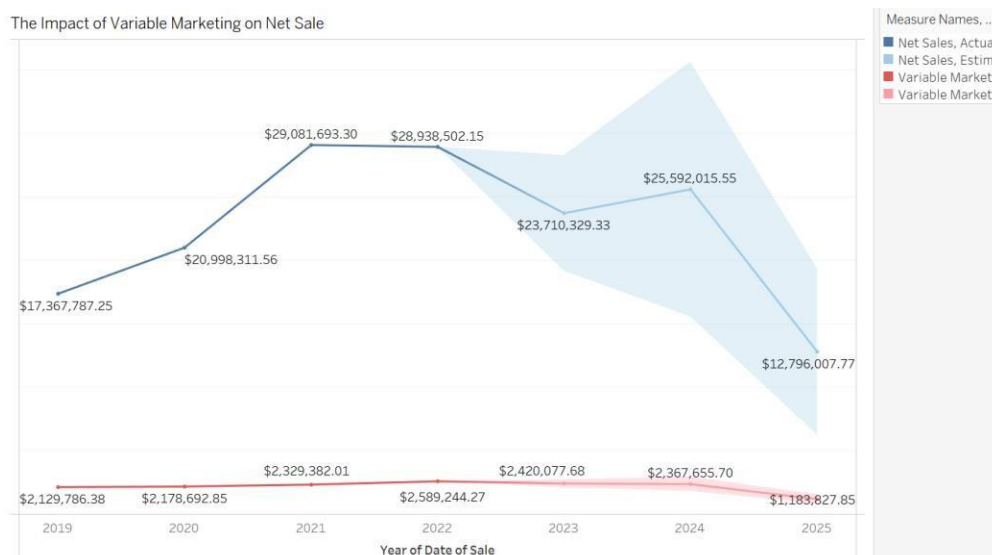
Appendix 3.4: Popularity Seat and Trim all region



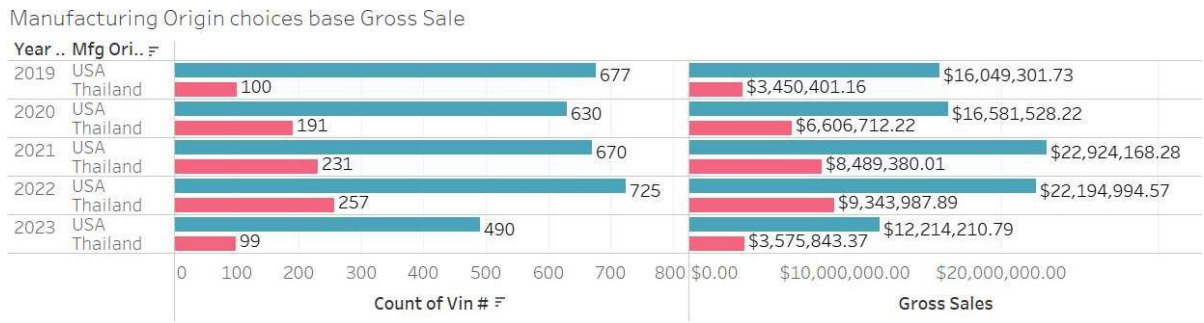
Appendix 3.5: Days on lot by model in North America and Asia in 2023



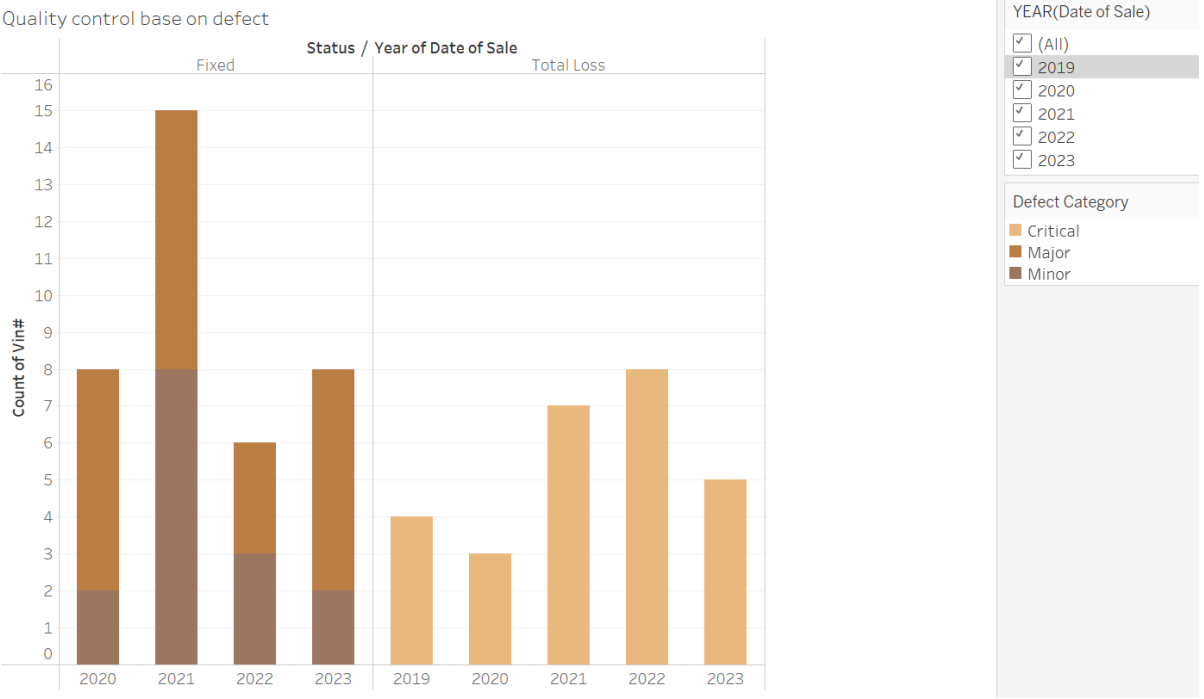
Appendix 3.6: The impact of Variable Marketing



Appendix 3.7: The comparing between the manufacturing Origin and Gross Sales

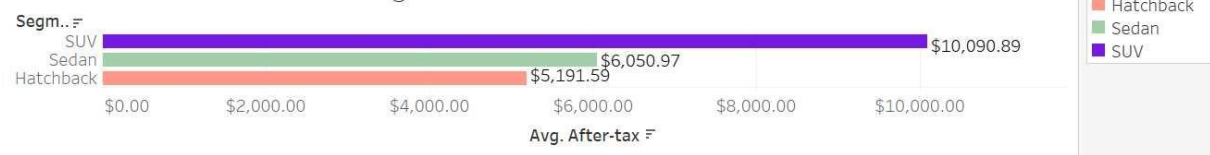


Appendix 3.8: Quality control base on defect in all year



Appendix 3.9: After- Tax Revenue of each segment

After- Tax Revenue of each segment



Appendix 4.1: Forecasting dashboard

Estimating changes in SparkEV's business base on Sales, Costs, Contribution Margin and Revenue in the next 2 years.



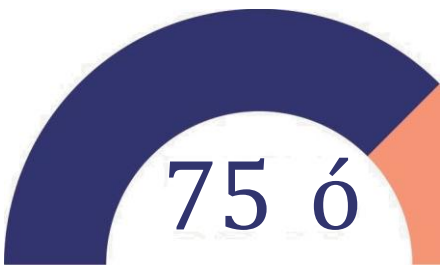
NAVIGATING THE ROAD AHEAD

Gpark EY Business Analytics

This informative infographic visually analyzes SparkEV's business performance across key dimensions to paint a comprehensive picture

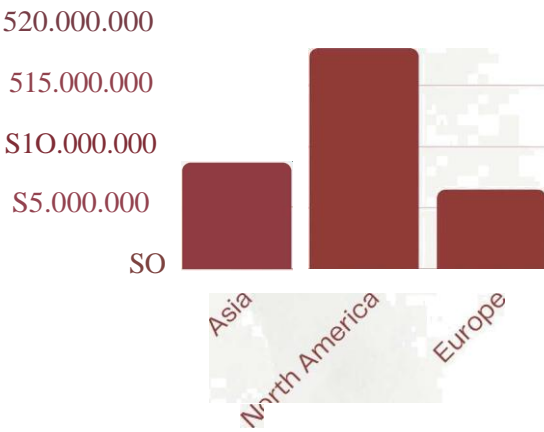
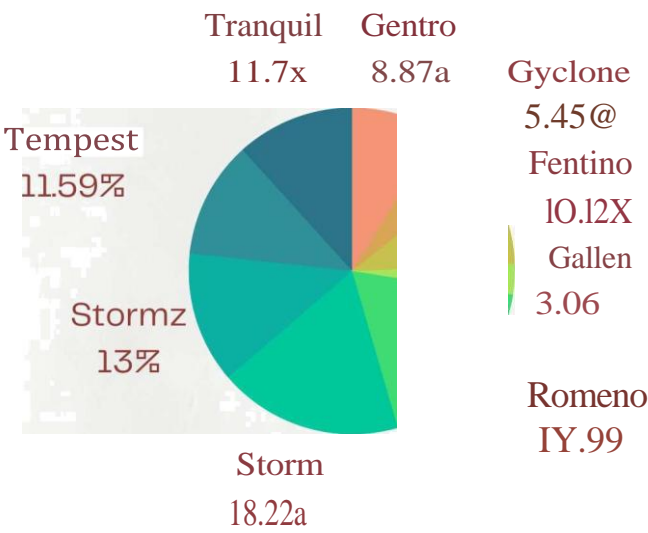
vo'i couuvRY Or EACH REGION BY GROSS SALE

USA: S45,228,369
Netherlands: S7,556,720
Indonesia: S8,270,031



HIGHEST SALE BY REGION

USA has S8IM Thailand has 63OM



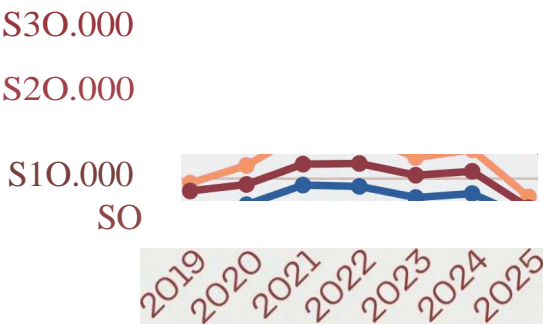
Alter- tax revenue by model
Total - 62T,516,251

Regional revenue comparison

Use this space to highlight essential data that readers need to take note

2 YEARS FORECAST

Drecreasing trend, facing many difficulties



Model has the longest days on lots in each Region

Asia: Centro
North America: Stormz
Europe: Tranquil

