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**MINI DESERTATION- EBUS 635**

**Title: Recognizing the Potential of Big Data Analytical Techniques to Adapt the Car Industry to Shifting Consumer Preferences**

**Submitted in partial fulfilment of the MSc Business Analytics and Big Data, September 2023**

**University of Liverpool Management School**

**Student Number: 201679994**

**Team 7 (Speedz Motors)**

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**ABSTRACT**

The purpose of big data analytics in the UK car sector is examined in this paper. It demonstrates how crucial the sector is to the economy and how utilising big data might enhance its internal operations.

The vehicle business is going through a fundamental change as a result of evolving consumer preferences, technological advancements, and growing environmental concerns. For automotive companies, big data analytics has developed into a potent instrument for being competitive and adaptive in this period of change. In order to assist the automobile industry in adapting to shifting customer expectations, this dissertation examines the use of big data analytics, shedding light on its consequences, challenges, and potential applications.

In-depth market research and analysis are carried out by executives in strategic planning, which is essential in the auto sector. Various big data solutions solve the substantial technological problems that real strategic planning analytics raise. Following that, the study presents findings and conclusions from a complete business simulation that the Speedz Motors team conducted. The report covers the business's performance, changes in market share, and the dynamics of strategic decision-making. In addition, issues with teamwork and communication are discussed, along with solutions.

How research and development could enhance product quality and adjust to changing consumer preferences is looked at. We focus on how big data insights were leveraged to successfully match consumer preferences, road conditions, and safety standards as we investigate market segmentation and personalization options. The sales performance is thoroughly scrutinised over the course of the business simulation's six rounds to demonstrate how data-driven decision-making impacts sales growth. The report underlines how important data analysis is to raising sales performance and coming to informed strategic conclusions.

The conclusion of this dissertation demonstrates the big data analytics' transformative potential in the automotive industry. It demonstrates how data-driven decision-making can enhance strategic planning, boost sales, and ensure that products are in line with shifting consumer preferences. By conquering challenges and employing data analytics, automotive companies may thrive in this era of unprecedented change.

1. **INTRODUCTION**

Recent years have seen a paradigm shift in the automotive industry brought on by shifting consumer demands, technical breakthroughs, and environmental concerns. As a result of consumer desire for more individualised, environmentally sustainable, and technologically advanced vehicles, the traditional automotive landscape is changing (Silahtaroğlu, G. and Alayoglu, N., 2016). The automobile industry has resorted to big data analytical tools as a potent instrument to traverse this shift in order to stay competitive and responsive to these changing dynamics. This dissertation will examine the use of big data analytics to help the auto industry adjust to changing consumer preferences, illuminating the impact, difficulties, and potential (Zorpas and Inglezakis).

A close-up of a graph

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Figure 1 Fig: European Automotive Market Size

According to European Automobile Manufacturing Association, the European market grew by more than 17% with more than 1 million new units registered. The market share of battery-electric vehicles increased from 10.7% to 15.1%, first surpassing that of diesel vehicles (Larsson). With 24.3% of the market, hybrid-electric vehicles remained new car buyers' second-most preferred option. But with a share of 36.3%, gasoline-powered vehicles continued to hold the majority. Hence effective strategic management. The automobile sector has always undergone change, but the rate and magnitude of change in the last several years have been unprecedented. The need for novel solutions like Big Data analytics is being fuelled by a number of significant factors that are transforming the sector (Beier et al., “Sustainability Aspects of a Digitalized Industry – a Comparative Study from China and Germany”).

Considering these changing demands and changing consumer preferences, the strategic planning executive plays an important role in automobile manufacturing industry (Beier et al.). Hence effective strategic planning is very crucial for this. Strategic planning executive offers in depth market research and analysis. Along with other departments like HR, manufacturing, finance and marketing, the strategic planning executive provides significant insights from manufacturing the car to making sure that the car models and components aligns with market demands and technological advancements. They prioritize the features, design performance according to the customer expectations and needs (Larsson).

My intense interest in big data analytics has motivated me to look at how its use might improve the job of the strategic planning executive and organisational performance (Febtriko et al.). In actuality, the quick rate of globalisation and the fierce market competition call for sustainable solutions through the adoption of best practises in human resource management and the use of data analytics for better decision-making.

Our team used the business game tool to meticulously duplicate each concept and choice made throughout the course of the project. As a strategic executive at Speed, it is my responsibility to ensure effective management of the business' strategies, product development, competitive advantage, resource allocation, and stakeholder satisfaction by providing competitive solutions and making wise choices (Kristoffersen et al.)

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Figure 2 Speedz Motors Team Logo

Recognizing the Potential of Big Data Analytical Techniques to Adapt the Car Industry to Shifting Consumer Preferences is the core focus of this research. In this dissertation the following questions will be answered:

RQ1 : How do customer behaviour and marketing tactics in the automobile industry differ as a result of big data analytics ?

RQ2: Utilising Big Data Analytics to Assess Market Segmentation and Personalization Methodologies in the Automotive Sector.?

I have used the following outline for the dissertation. Firstly, An detailed review of pertinent literature will be done. This examination of the literature will outline how big data affects strategic planning analytics and explain its significance in relation to the automobile sector (Delen, 2015). In addition, it will explain numerous big data technologies, drawing on my background in the sciences to address the complex technological difficulties related to the real-world application of strategic planning analytics.

Secondly, the dissertation will present the findings and overall results derived from the six rounds of the business simulation. Through a meticulous analysis of the outcomes of each round, the section dedicated to business game analysis will endeavour to define our organization, Speed Motors, its primary activities, and the collaborative dynamics within the business game (Kristoffersen et al.).

Following the presentation of findings, the discussion section will critically evaluate the firm's performance, identifying potential risks and issues(Khan et al., 2017). It will also enumerate the myriad operational and strategic hazards that can emerge in the realm of strategic planning.

Finally, the dissertation will conclude by discussing key insights gleaned from the research, placing them within a broader context, and outlining potential directions for future research endeavours (Buaphiban and Truong).

1. **LITERATURE REVIEW**

**PURPOSE OF DESERTAATION**

The purpose of this dissertation involves investigating the companies need to be able to assess and manage the growing data volume effectively. According to a detailed Harvard research involving 5,000 corporate executives it was found out that implementing a randomized controlled trial and analysing the data is crucial for strategic planning executives (Zorpas and Inglezakis). This entails gathering pertinent data and incorporating it into their decision-making processes, which is essential for successful operations. This is especially important in the context of strategic planning, where the accessibility to correct and up-to-date information has a considerable impact on how effectively corporate operations are conducted. Despite the fact that Strategic Planning divisions frequently work with large amounts of data, their directors may confront difficulties in turning this data into useful insights.

In the end, this study aims to advance the body of knowledge around the use of big data analytics to the automobile sector and provide guidance for the creation of evidence-based interventions for shifting consumer preferences.

**THE NEED OF BIG DATA IN STRATEGIC MANAGEMENT**

**The need of Big Data in Strategic Management**

All round the globe, corporate strategic management has become an essential management method that influences an enterprise's growth (Arena and Aprea). As we are upgrading and moving towards technological innovation, the field of information technology has become a more important aspect of our lives, even business practices have altered. The technical cycle refers to this. In a few years, the technology we use now will be outdated, and executives will need to adjust to new platforms and managerial practices. Big data's importance and size make it more critical to use in corporate planning and decision-making. With the aid of the available Big Data, business intelligence tools and executive information systems are strengthening their capabilities. When making decisions is as easy and precise for executives as it is for employees who use computers on a regular basis, they may benefit from new technologies (Kristoffersen et al.).

Big data is a big trend in today's organizations. Big data appears to be the new buzzword in business. It is a collection of structured, semi-structured, and unstructured data collected by organizations and used for information mining in machine learning projects, predictive modelling, artificial intelligence, robotic process automation, data mining, and other advanced analytic applications. This expands the scope of accomplishments with extravagance (Nik Abdullah et al.). While research on many areas of Big data is thriving, little is known experimentally regarding its influence on corporate strategies. Big data is one of the most difficult subjects in modern marketing research.

Despite its significance, big data-driven strategic orientation in international marketing has yet to be conceptualized. Because information technology is an unavoidable element of our lives, the way we do business changes every five to eight years. This is referred to as the technological cycle. The technology we use now will be outmoded in a few years, and managers will need to adapt to new systems and management methods. When big data becomes so large and essential, its application in company planning, management, and decision making becomes increasingly critical. With the support of Big Data, Business Intelligence tools and Executive Information Systems are strengthening their capabilities. Executives may benefit from the benefits of modern technologies when making choices more simply and precisely, as subordinates do when using computers for regular company processes (Nik Abdullah et al.).

**BASIC CONCEPTS OF STRATEGIC PLANNING**

**Basic concepts of strategic planning**

Every company gathers data from a variety of sources, including the Internet of Things (IoT), websites, social media, and smartphones. Capturing enormous volumes of data is simpler, but data can only be useful to a business if it is efficiently handled. While big data may help organizations expedite management choices, a thorough strategic strategy is required to fundamentally alter an organization. The information overload, storage expenses, and ambiguity about how to use it all contribute to the perplexity (Febtriko et al.).

Strategic planning is an essential process for organizations to establish their goals, make educated decisions, and efficiently allocate resources. The rise of Big Data in recent years has revolutionized the way firms function and created new opportunities for strategic planning (Arena and Aprea). The purpose of this article is to investigate the fundamental principles of strategic planning using Big Data and their significance in today's corporate scene. It is analysing an organization's internal and external environments in order to design strategies that are in line with its goals. Organizations acquire huge volumes of data from many sources such as social media, consumer interactions, market trends, and operational procedures when it comes to utilizing Big Data in strategic planning. This information is then analysed using advanced analytics techniques to obtain insights that may be used to assist decision-making.

The use of Big Data in strategic planning has various advantages. For starters, it allows businesses to obtain a better knowledge of their consumers' preferences, behaviours, and demands. This enables them to personalize their products or services to the needs of their customers, resulting in enhanced customer satisfaction and loyalty.

**IMPORTANCE OF BIG DATA IN AUOMOTIVE INDUSTRY**

**Importance of Big Data in Automotive Industry**

Many countries are undergoing digital transformations. This has resulted in an increase in the amount of data available on industrial production processes (Khan et al., 2017). The current ability to gather and analyse massive volumes of data (big data) provides businesses with chances to enhance their business operations. "Big data" (Gartner, 2018) is defined as "high-volume, high-velocity, and/or high-variety information assets that necessitate cost-effective, innovative forms of information processing that enable enhanced insight, decision making, and process automation." Descriptive, predictive, and prescriptive analytics are three forms of big data analytics that build on one another (Delen, 2015).

The automobile industry is one of the top industries reaping the full benefits of big data. Big data analytics has aided the automotive industry in increasing sales and marketing efficiency (Beier et al.).

Today, automotive innovation has radically transformed the globe with electric and self-driving automobiles. Big data analytics is used in the automotive sector for anything from factory optimisation to boosting consumer happiness.

Applications:-

Supply Chain Management (SCM): To improve their organization's overall efficiency, they require a strong supply chain management system.

Connected Cars: Big Data analytics is becoming an important component of the vehicle business.Cars that are linked can interact bidirectionally with systems that are not part of the car's LAN (Local Area Network). This function enables the vehicle to share internet connectivity with devices both inside and outside the vehicle.

**ROLE OF BIG DATA IN STRATEGIC PLANNING**

**RELATIONSHIP BETWEEN BIG DATA AND STRATEGIC PLANNING**

Strategic management accounting (SMA) practises are critical in management decision-making in order to establish, convey, and implement a company's strategy. SMA practises must provide accurate, up-to-date, and appropriate management accounting information to support these judgements. With SMA, an organisation will be able to fulfil the companies’ goals, gain competitive advantage, sustain economic growth, and market positioning that secures long-term performance (Abdullah et al., 2020). As a result, SMA faces issues in ensuring that proper information is constantly available as a major supplier of information. There is very limited evidence of technical developments within SMA despite major changes taking place in manufacturing technology (Appelbaum et al., 2017; Abdel-Kader & Luther, 2006).

**CHALLENGES FACED BY STRATEGIC PLANNING DEPARTMENT**

Strategic planning is an essential process that helps organizations define their goals, set a course of action, and allocate resources to achieve long-term success. However, this process is not without its challenges. In this essay, we will explore the key challenges faced by strategic planning and discuss potential solutions to overcome them. From the ever-changing business landscape to internal resistance, strategic planning requires adaptability, collaboration, and effective communication (Larsson). By understanding and addressing these challenges, organizations can enhance their strategic planning efforts, leading to improved decision-making, resource allocation, and ultimately, sustainable growth.

One of the primary challenges faced by strategic planning is the dynamic and unpredictable nature of the business environment. In today's fast-paced world, technological advancements, market disruptions, and shifting consumer preferences can significantly impact an organization's strategic direction. Adapting to these changes and staying ahead of the competition becomes paramount

**PRACTICAL APPLICATION OF BIG DATA ANALYTICS IN MANAGING STARTEGIC PLANNIG**

Big data is a technology that stores, converts, transmits, and analyses massive amounts of organised or unstructured data, which may be dynamic and diverse, for the goal of social or commercial applications. Big data apps must be capable of doing high-complexity and real-time analysis of massive volumes of data in order to assist users in making decisions in the quickest feasible timeframe. As a result, big data technologies and the associated business are growing in importance (Gartner, 2018).

Big data is a combination of multidisciplinary technology that benefits customers by offering extraordinary services to them with the push of a button. The Internet of Things connects the world of machines by enabling every gadget to communicate with other devices and access the Internet. Big Data opens up a new world of possibilities in these systems.

1. **METHODOLOGY**

As a team we had to perform various analytical and strategical cycles which led us to get desired good results in the business simulation game. Right from forming a well defined strategy to discussing the ideas, critical examination and evaluating results(Delen, 2015).

1. Articulating Research Objective

It is crucial to specify specific study objectives in order to provide a sense of purpose, direction, and motivation. These goals act as waypoints, illuminating the way to the intended results. The careful examination of internal corporate data from all operating phases is the main goal of this study project. To acquire a thorough grasp of Speed motors current situation and environment, a detailed investigation and comparison of group competitors are also conducted (Febtriko et al.). A thorough problem definition is required as the first step in utilising analytics to address important concerns. Additionally, this research trip sets out on a quest for knowledge by examining previous literature that appropriately responds to the stated research inquiries.

1. Collecting Research Data

Accurate measurement is necessary regardless of the location or method of data collection. Many metrics may be used to assess each employee's performance on the job. For example, a strategic planner might conduct market research to learn more about what it's like to operate in the sector, while an analyst might see personnel in action and grade their performance. Therefore, different measurement techniques and sources can be used to measure the same idea. Since each issue must be assessed using a business simulation, all pertinent information is gathered from reports that are generated automatically (Kristoffersen et al.).

1. Metric Calculation and Data Processing

The foundation of effective research is a methodical approach to data collection. Precision continues to be the most important factor regardless of the data's source or method of collecting (Delen, 2015). To fully assess employee performance, a variety of metrics are used. These metrics may include employee questionnaires to learn about their perspectives on the sector or they may involve direct observation of individuals performing their duties, supplemented by performance evaluations. Given the breadth of the business simulation, information is carefully gathered from automatically generated reports made available on the website.

1. Investigating Data Insights

Excel is used at this point as the statistical tool to find important relationships and problems in the business simulation. The painstakingly made line graphs and bar charts, which were created from the processed data, give researchers a quick visual representation of the performance and broad patterns of the organisation.

1. Concluding Research Outcomes

The results of the data analysis will be used to confirm the specific problem, and the sixth section will provide a conclusion about the drawbacks of simulations and possible directions for development.

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Figure 3 Business Simulation Game

1. **BUSINESS GAME ANALYSIS**

Decision-making and Teamwork. The practical strategy that our team, Speedz Motors, adopted while competing in real time will be highlighted in this section (Gartner, 2018). There are two distinct portions in it. The first section would go into detail on teamwork and performance evaluation of the entire company. The second section, on the other hand, will go through the specific analytics findings of the outcomes and the tailored settings of how customer behaviour evolved. In the Business Game, the making process.

The business simulation game is a useful tool for putting theoretical knowledge into practise and for developing understanding of the difficulties, dangers, and possibilities present in the business world (Febtriko et al.). The accomplishment of the organization's goals is impacted by every choice made by each department within the corporation. Juggling through the summary of our teamwork and the general success of our business, it would be evident that the process we followed was according to our strategy. Additionally, it aims to support and confirm my position on the team as well as the topic of my dissertation, which is the efficient application of big data analytics for human resources management. Utilising data insights, which enables organisations to make accurate decisions based on the results of analytics, is at the core of business analytics.

**Collaboration and Decision-Making In the Business Game**

In the business simulation, our company was called speeds motors. We competed in a small European market. We played the role of a small automaker company and eventually raised our market share, introduced new models and gained good amount of capital at the end of the business game. Our company introduced different models like FX-90, AX20, AF10, luxury car models like SX40 and SUV models like SV80 (Akter et al.).

A graph of different types of cars

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Figure 4 All the Models launched by Speedz Motors

The overall performance of all the models and companies growth can be accessed from the above image. The teamwork included people handling different departments like HR, Marketing, manufacturing and finance personnel. Business analytics is a tool that makes it easier to gather important data about client behaviour, optimise business operations, and spot development prospects. Business analytics is a key component of development and innovation initiatives for organisations across a wide range of industries (Buaphiban and Truong).

A graph showing the growth of a number of people

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Figure 5 Week 6 Production Report

The main goals were to grow market share, boost sales and profitability, raise corporate performance and brand value, and strengthen the financial situation. We put our choices to the test in the business simulation to determine how effective they were.

**MARKET RESEARCH & CAPTURING**

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Figure 6 Market Awareness Analysis

By examining sales distribution, product price, and market share, it was possible to understand sales in several size categories, such as Small, Medium, Large, and Luxury, revealing their market presence (Delen, 2015). Since the company grew its market share, the models' prices were incredibly competitive. Data on product prices and market dispersion show how our team set prices. Since the company offered a wide range of designs, it was easier to serve a broad consumer base.

Having a sizable market share may be a key factor in determining an organization's significant market share may play a significant role in deciding how profitable an organisation is. Companies with a significant market share usually experience economies of scale, which cut costs and boost profitability, according to research from Investopedia. Additionally, companies with a high market share usually have more negotiating power with suppliers, which helps to reduce costs and boost profitability.

The accompanying bar graph shows Speedz Motor's market share in the European automotive industry. It is obvious that the company's market share changed a lot throughout that time, but everything worked out well in the end.

The primary factor behind the observed changes in market share was a failure to thoroughly analyse and comprehend data while making strategic decisions. The history and current situation of the market were covered in the simulation manual, which served as a basis. We were able to grab a substantial portion of the car sector as a consequence and win the first round. In the years that followed, our market share declined as a result of our incapacity to use outside information, such as market perception and customer feedback, while making decisions. Instead, we solely used the manual and corporate reports, which only offered limited and out-of-date information on units sold, units unsold, and market share. As a result, our strategies were based on sparse and inaccurate information.

For round four, concepts were developed using these reports. Following that, during round four, the choices made as a result of these concepts were put to the test (Nik Abdullah et al.). The results of this round unequivocally show that we are capable of capturing a sizeable chunk of the market share. Our efficient use of data, in-depth analysis, the discovery and correction of problems, the design of a strategic plan, and the following market resurgence are all factors that contributed to this achievement. When it came time to submit our choices in round five, our team ran into a technical problem.

The outcomes from the prior round were consequently submitted, making them out of date. It is clear from this that market share decreased throughout round five of the competition. On the other hand, in round six, we had lengthy meetings to come up with plans for minimising the loss. Through this procedure, we were able to create a plan that was more successful, enabling us to successfully recover in Year six and take around nine percentile of the market.

A graph of a market share

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Figure 7 Market Share

**RESEARCH AND DEVELOPMENT**

At Speedz motors, we invested heavily in the research and development since start. Research is the forefront of driving and developing innovation. It helped our team to cross the competitive edge and ensuring that vehicles must be qualitative and reliable (Febtriko et al.).

It can be used to answer and discuss the second research question i.e. Utilising Big Data Analytics to Assess Market Segmentation and Personalization Methodologies in the Automotive Sector. Using the research data, we were able to improve the quality of our products manufacturing. IN the following figures, it can be observed that the research and development lead to improving the car models from round one to round six:

A screenshot of a computer

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Figure 8 R&D for car models in first round.

A screenshot of a computer

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Figure 9 R&D for car models in sixth round.

**ANALYZING MARKET SERGMENTATION AND PERSONALIZATION METHODOLOGIES:**

As a strategic planning advisor, it was crucial to consider the investment as well as people response to these factors in competitive atmosphere. This list of product attributes and designations includes terms like "Facelift," "Smart Driving Controls," and "Biometric Vehicle Access," among others (Arena and Aprea). These items represent several facets or components related to a product line or company. The "Online" items denote that certain features or goods are now available or operational.

Using Big Data and Analytics, it was easy to understand the various regional requirements and keep the models up to date with the diverse requirements. All these analytical insights were used to meet safety standards, road conditions and consumer preferences (Beier et al.).

The "Failed" labels suggest that particular features or items have run into problems or haven't had the results they were hoping for. Numbers are included in some entries. These numerical values might represent performance evaluations, scores, or other quantifiable criteria related to the relevant objects. For instance, a score of "10" for "Lightweight Roof" would denote exceptional performance or excellent success in that field. The "Price Increase" statements refer to certain product line models FX90, AX20, AF10, SX40, SV80 that have had significant price increases. The amount of these price modifications is shown by the percentages i.e. 39% and 64%. Understanding changes in pricing strategies for these particular models depends on this data.

In conclusion, all the market conditions and segments were analysed using big data. Further, they were personalized using appropriate methods. By analysing the summary of various goods or features, their present state, and recent price changes for various models within the company's product line, we can say that changing consumer preferences were appropriately handled.

A graph of different colored bars

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Figure 10 Final Year Production

**SALES**

At Speeds Motors, we have had mixed sales response. Using big data analytical methods, we tried to develop some relationship between sales pattern and consumer preferences(Febtriko et al.).

It's essential to have a thorough understanding of the behavioural patterns and intents of potential consumers in order to boost sales effectiveness through analytics. Sales teams require precise and detailed data on consumers, including their actions and intentions, to increase sales. However, there are a number of important difficulties with consumer analytics. Delivering dashboards and reports that typically lack actionable insights, a lack of understanding of how to get value from customer analytics, and sales systems and pipeline analytics that ineffectively record the buyer's journey are just a few of the challenges that must be overcome (Nik Abdullah et al.).

A graph with blue bars

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Figure 11 Total Sales From Round 1 to 6

Sales decreased in rounds two and three, mostly as a result of our lack of data utilisation and analysis in our decision-making process. Due to our inadequate consideration of client preferences, different feature requests were made by different customer categories. We introduced features based on subjective judgements rather than data-driven insights, which resulted in lower sales and more unsold inventory. The sales success of our firm is shown in millions on the given line graph. Our selections were initially largely based on the Handbook during the first cycle, which had a limited positive impact on sales growth.

In the fourth cycle, we modified our decision-making process to take market changes and client preferences into account. As a result of this change, sales significantly increased in the following year, underscoring the crucial significance that our greater comprehension of market insights and response to market demands played. Due to technological issues that made choice submissions harder, Round 5 saw a decline in sales. But in Round 6, we used the same approach as in Round 4, relying on data analysis to make wise decisions. In Round 6, this approach generated large sales of almost £21 billion, highlighting the important role that data and analytics play in guiding our strategic choices.

1. **CRITICAL ANALYSIS**

The significance of big data analytics for strategic planning and its effects on the automotive industry are covered in the study paper (Akter et al.). Since, as indicated in the methodology, the data structure is independent in the business game, this section does not cover specific technologies or techniques for carrying out effective strategic planning in the company during business simulation. However, by using the strategic analytics metrics, the required workforce calculations, and the statistical approach of predictive analytics, Speedz Motors may successfully avoid turnover. Despite the possibility of some subjects being covered

Challenges in Teamwork: Keeping the team together and having a cohesive focus on a single objective presented challenges. Progress was also hampered by communication problems, which were made worse by several team members' sporadic absences during the lab sessions of the business simulation game. Regular weekly team meetings were put in place to successfully address these issues (Beier et al.).

Communication Hurdle: At Speedz Motors, the difficulty of communication barriers was a significant roadblock for our project (Febtriko et al.). The seamless sharing of vital information and creative ideas within the team depends on effective communication. To overcome these obstacles and make sure that crucial information and ideas could be communicated effectively among team members, we had to put methods into place including creating clear communication norms, promoting active listening, and using collaborative tools.

Problems with Decision-Making: The lack of data analytics in our preliminary rounds was one of the significant limitations in our decision-making process (Nik Abdullah et al.). The financial problems experienced by our organisation were greatly influenced by this omission. For example, in the preliminary stages, we did not factor in company reports, especially in terms of employee engagement and satisfaction. As a result, our productivity index remained below ideal levels and faced strikes as well.

Lack of Real-World Case Studies: The paper does not provide any automobile industry case studies or real-world situations that would graphically illustrate how big data technologies may be used to manage human resources. The report's capacity to offer practical insights into how these technologies are used effectively in the automobile sector is constrained by the lack of specific examples.

1. **CONCLUSION**

This dissertation started a thorough investigation of the crucial function that big data analytics plays in strategic planning, with a focus on the automobile sector. This study highlighted the critical function of data analytics for strategic planning executives, emphasising the necessity of acquiring relevant data and incorporating it into decision-making processes.

Utilising big data analytics to evaluate market segmentation and personalization methodologies in the automotive sector, the research paper addressed the questions of how customer behaviour and marketing strategies in the automotive industry differ using big data analytics.

By describing the painstaking procedure of data collection, processing, and analysis, the methodology section highlighted the practical side of this study trip. The necessity of precise data gathering techniques, the significance of having defined study objectives, and the demand for thorough data processing were all emphasised.

The business game study gave a first-hand picture of the difficulties and victories our team, Speedz Motors, overcame while navigating the complexity of the automotive sector (Febtriko et al.). It brought home how crucial cooperation is to accomplishing our strategic goals and raising productivity in the workplace. As Speedz Motors, we struggled with the dynamics of the market, shifting consumer tastes, and the necessity of data-driven decision-making. We used data analytics to improve our car models and adjust to market needs, which highlighted the significance that research and development had in defining our product offers.

This dissertation's conclusion highlights the crucial role that big data analytics plays in influencing strategic choices, mirroring the finish of our study journey (Larsson). The difficulties encountered along the way—from cooperation difficulties to communication difficulties—serve as important lessons for future initiatives. The importance of integrating big data analytics as a cornerstone of strategic planning is highlighted in this dissertation's conclusion, which reveals the way forward for organisations in the automotive sector and beyond.

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