

THE ROLE OF ARTIFICIAL INTELLIGENCE (AI) IN SHAPING SUSTAINABLE BUSINESS PRACTICES AND THE EVOLVING LANDSCAPE OF MANAGEMENT CONSULTING

by

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Abstract

This dissertation examines the integration of artificial intelligence (AI) in enhancing sustainable business practices within the realm of management consulting, with a focus on leading firms such as McKinsey, Bain & Company, and Boston Consulting Group (BCG). The research is motivated by the critical need for businesses to adopt innovative technologies that foster environmental sustainability alongside economic profitability.

The study addresses several research questions centered around the efficacy of AI in promoting sustainable practices within management consulting firms, the challenges faced in its implementation, and the strategic advantages it provides. These questions are explored through qualitative methods, primarily semistructured interviews with key stakeholders and an analysis of secondary data from industry reports and academic literature.

Findings from the research demonstrate that AI significantly contributes to strategic decision-making, enhances operational efficiencies, and supports sustainable business models by providing data-driven insights and enabling more effective resource management. However, the adoption of AI is also met with challenges such as ethical considerations, the need for significant investment in skills development, and the management of stakeholder expectations.

The dissertation contributes to the existing body of knowledge by detailing practical implementations of AI within a critical sector and suggesting frameworks for overcoming the obstacles encountered. Recommendations are provided for firms looking to leverage AI for enhanced sustainability in management consulting practices.

Keywords: Sustainability, AI, Management Consulting, Ethical Considerations, Strategic Decision-Making, Operational Efficiencies, Skills Development.

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Table of Contents

Chapter One: Introduction	10
1.1 Background of the research: Changing landscape of management consulting by implication	y AI 10
1.2 Research problems: Role of AI in shaping practices of management consulting	10
1.3 Research aims, rationale, and methodology	11
1.3.1 Research aim	11
1.3.2 Research Rationale	12
1.3.3 Methodology	12
1.4 Data collection and analysis	13
1.5 Outline of the study	13
1.6 Research Rationale	14
Chapter Two: Literature Review	15
2.1 Introduction	15
2.2 Conceptual Framework	15
Figure 2.1: Conceptual Framework	15
2.3 Impact of AI in developing and implementing sustainable business practices	16
Figure 2.2: Impact of AI on developing sustainable business practices	16
2.4 Current trends, challenges and opportunities related to AI integration for sustainab	oility
initiatives	17
Figure 2.3: Recent trends associated with AI for sustainability initiatives	18
Figure 2.4: Challenges in AI integration for sustainability initiatives	19
2.5 Impact of AI in Shaping Future Management Operations, especially in Sustainab	oility
Consulting	20
2.6 PESTLE analysis focusing on shaping AI in business and management consulting	21
2.7 Theoretical Framework	22
Figure 2.5: "System Theory of Corporate Sustainability"	22
2.8 Literature gap	22

2.9 Summary	22
Chapter Three: Research questions and objectives	23
3.1 Introduction	23
3.2 Research questions	23
3.3 Justification of Research Questions	23
3.4 Research objectives	23
3.5 Justification of research objectives	24
3.6 Conclusion	24
Chapter Four: Methodology	24
4.1 Introduction	24
4.2 Research Onion	24
4.3 Research Philosophy	25
4.4 Research Approach	26
4.5 Research Design	27
4.6 Data Collection Method	28
4.7 Sampling Method	29
4.8 Data collection process	30
4.9 Data Analysis	31
4.10 Ethical Consideration	31
4.11 Summary	32
Chapter Five: Findings and Analysis	33
5.1 Introduction	33
5.2 Primary data findings and analysis	33
5.3 Comparative Analysis	35
5.4 Discussion	35
5.4 Summary	39
Chapter Six: Discussion	39

6.1 Introduction	39
6.2 Impactful strategies of AI in sustainable business practices of MBB firms	39
6.3 Detailed analysis of the companies's AI application strategies	41
6.4 Current trends of AI integration	42
6.5 AI's application in the growing business management consulting	44
6.6 Current challenges of AI integration	45
6.7 Conclusion	46
Chapter Seven: Conclusion and Recommendations	47
7.1 Conclusion	47
7.2 Recommendations	47
7.3 Limitations of Research	47
7.4 Contributions of the Research	47
7.5 Future Research Disserattion	47
Appendices:	57
Appendix 1: Interview Transcripts	57
Appendix 2: Interview Questions	58

List of Figures

Figure 2.1: Conceptual Framework

- Figure 2.2: Impact of AI on developing sustainable business practices
- Figure 2.3: Recent trends associated with AI for sustainability initiatives
- Figure 2.4: Challenges in AI integration for sustainability Initiatives
- Figure 2.5: "System Theory of Corporate Sustainability"
- Figure 4.1: Research Onion
- Figure 4.2: Inductive vs Deductive Approach
- Figure 4.3: Types of research design
- Figure 4.4: Data collection methods
- Figure 4.5: Sampling methods
- Figure 6.1: Strategies of AI in sustainable business practices
- Figure 6.2: Current trends in AI integration
- Figure 6.3: AI's most beneficial applications
- Figure 6.4: Current challenges of AI integration

Chapter One: Introduction

1.1 Background of the research: Changing landscape of management consulting by AI implication

This discussion describes in great detail how AI changes sustainable business practices, the methods of how strategies are used, and how people communicate with their targeted customers. Looking at McKinsey & Company, BCG, and Bain & Company as examples, the discussion sheds light on how AI has changed sustainable business practices and the always-changing world of management consulting. A constructive background is going to be presented in this chapter including the changing landscape of management consulting by AI application.

Early contribution

Early on it was mentioned that AI changed the way management consulting works in a big way, especially for MBB firms like Bain & Company, McKinsey & Company, and BCG. AI improves critical thinking, makes boring tasks easier, and helps people make choices based on data, all of which improve the advice process (Tavoletti, Kazemargi, Cerruti, Grieco, & Appolloni, 2022). AI tools help these businesses study the market, spot trends, and find out more about their customers.

Focus shifting management

McKinsey & Company, BCG, and Bain & Company are trying to keep up with the changing world of management consulting by focusing on strategy integration and talent development. This is because AI is getting better all the time. Leaders put a lot of emphasis on adding AI to advisory models to make them more useful to clients and to spark new ideas. As per the consideration of (Dwivedi, et al., 2021), there is also a strong push to make AI experts better, which supports an attitude of always learning and changing. MBB companies will stay on the cutting edge of using AI thanks to this change in strategy.

Implication of digital transformation

The digital shift of management consulting has been affected by AI. According to Chan (2023),' AI helps the management consulting companies get better at solving problems and coming up with better ideas. AI also makes it easier to modify solutions, increases output, and sparks new ideas when working with clients.

1.2 Research problems: Role of AI in shaping practices of management consulting

Interpretability and Bias in Algorithms: AI systems may be biased, which means these might come up with wrong ideas or studies (Leal Filho, et al., 2022) For clients to trust a consultant and follow the rules, the consultant needs to make sure that formulas are fair and easy to

understand. Multinational businesses need to find ways to fix AI models that are biased (Richey Jr, Chowdhury, Davis-Sramek, Giannakis, & Dwivedi, 2023).

Integration and Adoption by Clients: It can be hard to convince clients of the benefits of AIdriven solutions and get them to use these technologies in the way they do business now.

It is hard for MBB companies to find and keep people who are good at AI. As referenced by Birkstedt, Minkkinen, Tandon, & Mäntymäki (2023), data scientists, machine learning engineers, and AI experts are in short supply, which means there are skills gaps and more competition for skilled workers. Ethics and Rules: Using AI for advice brings up concerns about privacy, safety, and fairness that have to do with ethics and rules. MBB businesses have to follow strict rules and morals when they create and use AI-powered solutions. When MBB companies work on AI projects, they need to think about the pros and cons and make sure these have a good return on investment (ROI). Some of these are new tools, growing talent, moral concerns, and smart relationships (Leal Filho, et al., 2022). In the competitive world of management consulting, it can be hard for MBB firms to figure out how to use AI to make business practices last longer and stay ahead of the competition.

1.3 Research aims, rationale, and methodology

1.3.1 Research aim

This research's main aim is to discover how AI changes management consulting, more specifically how it impacts the environmentally friendly business practices at McKinsey & Company, BCG, and Bain & Company. It tries to figure out what AI is, what problems it can cause, and what opportunities it creates for making business advice more effective and meeting long-term priorities.

Objectives

- To check out how MBB companies (McKinsey & Company, Boston Consulting Group, and Bain & Company) use AI right now to see how it changes how these do consulting work and what these do for customers.
- To critically analyze the role of management advising, list the pros and cons of using AI as well as special emphasis on how it will affect businesses in the long run.
- To evaluate how AI could be used to improve consulting, strengthen relationships with clients, and adjust to how management consulting is changing.

Research Questions

Q1. How does the use of AI change the way that MBB companies (McKinsey & Company, Boston Consulting Group, and Bain & Company) usually do business, especially when it comes to being green?

Q2. Which issues arise when MBB companies try to incorporate AI-based solutions into their advisory services? What effect do these issues have on the growth of eco-friendly business practices?

Q3. What kinds of changes does AI make to the speed and value of MBB companies' management consulting work? How does this change the effects that clients get in the long run?

Q4. How can MBB companies best use AI to build long-lasting business practices that are ethical, keep customers happy, and guarantee long-term success?

1.3.2 Research Rationale

AI is becoming more important in making business practices last and changing the way management consulting is done, especially at big names like McKinsey & Company, BCG, and Bain & Company (MBB). This is why this study was done. Many areas are using AI more and more. This has huge and complicated effects on companies that do advising. Before anything else, MBB companies need to know what role AI plays in management consulting. As opined by (Budhwar, et al., 2023), this will help them stay useful and successful in a fastchanging business world. AI can be good and bad at the same time. It can help people get better at critical thinking and make things run more quickly, but it can also make it harder to hire the right people and follow ethical rules (Füller, Hutter, Wahl, Bilgram, & Tekic, 2022. Using AI technologies, MBB companies can give their clients more creative solutions that are based on data. This makes them smarter about what to do and has long-lasting effects on the world (Cetindamar, et al., 2022). This study's objective is to discover how AI-based advice can assist companies in becoming more ESG (environmentally, socially, and governance) friendly. By learning about the pros and cons of using AI, MBB companies can make plans that will help them handle this change well. As referenced by (Geske, et al., 2021), this study's main goal is to shed light on how AI affects MBB businesses' strategies and add to the talk about how technology, sustainability, and management consulting are linked.

1.3.3 Methodology

Qualitative research method

Through in-depth interviews with managers, consultants, and AI experts from McKinsey & Company, BCG, and Bain & Company, this study uses the qualitative research method. This will talk about their ideas, thoughts, and experiences regarding how AI is used in consulting companies and how it changes business practices that are good for the environment (Füller, Hutter, Wahl, Bilgram, & Tekic, 2022). Along with the interview data, internal records, case studies, and trade magazines will also be looked at. Thematic analysis will be used to find patterns, trends, and new themes that will help us fully understand the role of AI in making management advice within MBB businesses.

Descriptive literature review

Current academic and business literature about how AI affects sustainable business practices and management consulting at McKinsey & Company, Boston Consulting Group (BCG), and Bain & Company is carefully read as part of the detailed literature review method. Part of this method is looking for reports, articles, case studies, and white papers that are useful and putting them together. As highlighted by (Di Vaio *et al.*, 2020), one will look at the main ideas, trends, and themes that show how AI is being used, what problems it has, and what those problems mean for businesses and the environment. After the tests are over, these will show everything one knows about this subject at this time.

1.4 Data collection and analysis

Through current studies, industry reports, and case studies, the secondary data collection method, especially the thorough literature review, helps us understand how AI is changing management consulting in MBB businesses.

Qualitative data analysis method

- Framework analysis: One can get secondary data in a structured way by using framework analysis on current books, papers, and case studies that have to do with AI's effect on management consulting in MBB companies. Data is sorted and put into groups using this method based on predefined themes and patterns (Sjödin, Parida, & Kohtamäki, 2023).
- Thematic analysis: According to (Jacobides *et al*, 2021), the merger is a big step towards more quick and open ways of giving advice, which will help it stay relevant as the business world changes. Thematic analysis helps experts look through many sources and find themes, trends, and differences.
- Narrative analysis: Researchers find out more about the pros, cons, and challenges of using AI in consulting firms by reading the stories. As a result, these have a better understanding of how management consulting is changing and what that means for sustainable business practices.

1.5 Outline of the study

Chapter One: Introduction

A study was done on how AI affects sustainable business practices and management consulting at MBB firms like BCG, Bain & Company, and McKinsey & Company. The first part presents an overview of the study.

Chapter Two: Literature Review

There is a lot of academic and business writing about how AI affects sustainable business practices and management consulting at MBB companies like McKinsey & Company, BCG, and Bain & Company. The Literature Review part looks closely at this writing.

Chapter Three: Research questions and objectives

In this chapter, a detailed analysis of the identified research topic is going to be discussed. In making a significant impact in the research process, the questions are to be valued. The most significant role of AI in managing sustainable business practices is going to be discussed here.

Chapter Four: Methodology

In this section, the researcher focuses on the particular approaches and methods by which the future study is going to proceed. The significance of MBB firms in the current competitive market is discussed here.

Chapter Five: Findings and Analysis

The study's result presents the applicability of AI in the development of sustainable practices. The management consulting firm, MBB is to be managed in enhancing the overall sustainability of this concern.

Chapter Six: Discussion

In this section, the result of this study is going to be presented. The strategies by which AI impacts the sustainable business practices of the MBB firms are mentioned here. A detailed analysis of the companies is to be examined and presented here.

Chapter Seven: Conclusion and Recommendations

This is the last part of this discussion where the main issues in the AI application management process are presented.

1.6 Research Rationale

As referenced by (Bonetti *et al*, 2023), on the first point, AI is changing businesses all over the world, and MBB firms need to know what this means for management consulting. This study talks about how consulting companies use AI to make them more efficient, come up with new ideas, and make important decisions (Yigitcanlar and Cugurullo, 2020). People are also becoming more interested in businesses that are responsible and care for the earth, which fits with the focus on eco-friendly business practices. In managing a sustainable business, sustainable business management practices are to be implemented properly. In terms of handling the core business management process of MBB companies are to be improved.

Chapter Two: Literature Review

2.1 Introduction

This is one of the most important sections in the dissertation because it contains diverse perspectives associated with the research topic by evaluating different literatures of recent times. This research study mainly focuses on the impact of AI in shaping the future sustainable practices of business. Apart from that, this section also includes a discussion on the impact of AI in the evolution of landscape of the management consulting. A PESTLE analysis on shaping AI in business and management consulting is also mentioned. A theoretical framework is also discussed with the identified literature gap.

2.2 Conceptual Framework



Figure 2.1: Conceptual Framework

2.3 Impact of AI in developing and implementing sustainable business practices

Sustainable development in the current situation become one of the most important concerns and all organizations try to meet this goal without compromising the capability of future technical interference. From the point of view of Hofmann & Jaeger-Erben, 2020), in recent times, business environments all over the world have been suffering from different environmental issues such as "climate change, resource scarcity, and environmental degradation". This statement is contracted by (Di Vaio *et al*, 2020), the power of advanced technological integration can offer a solution to this problem and drive the operation process of the organizations into a sustainable process. In this context, the emergence of AI made a revolution in the business environment in terms of sustainable development.

AI possesses immense significance in tackling complex situations by offering innovative recommendations. According to the concept of (Verganti, Vendraminelli, & Iansiti, 2020), this particularly innovative and market-friendly technology is applicable in improving the efficiency of computer systems, which are capable of performing different tangible tasks with the help of human intelligence such as "problem-solving, learning, and decision-making". As per the point of view of (Van Wynsberghe, 2021), this innovative technology is useful in providing valuable information by analyzing a wide range of data along with appropriate pattern identification with the help of which a significant approach can be maintained in "evidence-based decision-making" which fully supports the initiatives and concern of sustainable development in the business. According to a current report, gathered from the United Nations, "Sustainable Development Goals (SDGs)" are acknowledged to be one of the most essential business goals for providing adequate support to develop a sustainable future in the business world. The most recent report of the United Nations presents that AI can be very helpful in achieving around 79% of the sustainable development goal (Sdgs.un.org, 2024). For the achievement of this goal, the organization needs to mitigate a wide range of issues such as "poverty, hunger, health, education, climate change, and inequality". This statement is contracted by (Di Vaio, Palladino, Hassan, & Escobar, 2020), AI helps offer the best solution by evaluating the market trends, previous decision-making, and types of data evaluation processes.



Figure 2.2: Impact of AI on developing sustainable business practices

(Source: Bag, Pretorius, Gupta, & Dwivedi, 2021)

Implementation of AI in business practice guides the improvement of sustainable development approaches by addressing and offering solutions to the challenges. According to the statement by (Bag, Pretorius, Gupta, & Dwivedi, 2021, pp789), AI is helpful in "environmental monitoring and conservation, energy efficiency and climate change mitigation and sustainable agriculture and food security". In making smart cities and preparing strong planning for urban development, AI is also very helpful as it guides to improve operational efficiency by evaluating all information and predicting all types of challenging factors (Hbr.org, 2024).

Implementation of this innovative technology is important and this process should be guided by experts. As per the perception of (Agrawal, Wankhede, Kumar, Upadhyay, & Garza-Reyes, 2022), AI is mostly used for the appropriate analysis of a large amount of data, identification of the potential pattern and prediction of future practices in the business operation process. For instance, AI can be applied in the business operation process to develop innovative ways for generating as well as conserving energy for the development of the productivity of the agricultural sector and to reduce the environmental pollution rate. As per the opinion (Mhlanga, 2021), AI is also used for maintaining automated activities, optimizing different operation processes, and reducing the volume of waste production. This can help make the business practice more efficient in terms of sustainable perspectives.

2.4 Current trends, challenges and opportunities related to AI integration for sustainability initiatives

In the current technological advancement situation, most organizations whether it is large or small implement this innovative technology as it is capable of performing all types of business activities by using human intelligence. According to the point of view of (Baldassarre, Keskin, Diehl, Bocken, & Calabretta, 2020), currently, AI identifies "data, patterns, and experiences, enabling them to make informed decisions and predictions", which is very effective for business practice. AI uses different complex algorithms and models for the analysis of huge datasets to generate valuable information to be helpful in decision-making and other activities. As per the writing of (Yigitcanlar, Mehmood, & Corchado, 2021), all these technologies have the potential impact to maintain a sustainable process by effectively optimizing resources, producing minimum waste, and resource application minimization.



Figure 2.3: Recent trends associated with AI for sustainability initiatives (Source: (Dhamija & Bag, 2020)

As per the point of view of Dhamija and Bag (2020), this technology has offered different waste management solutions by leveraging innovative technologies to identify different types of waste and offering effective solutions for the development of sustainable practices. This statement is contracted by (Cowls, Tsamados, Taddeo, & Florida, 2021), AI assures to implementation of automated sorting procedures, which helps streamline recycling procedures after the elimination of errors.

In terms of offering an effective solution in terms of supply chain optimization, AI also plays an important role by proper identification of efficiencies as well as providing effective suggestions with potentially sustainable alternatives. According to the point of view of (Allioui & Mourdi, 2023), AI can able to predict different analyses by the optimization of "transportation routes, inventory management, and demand forecasting". This innovative approach guides to improvement of the sustainable approach by reducing the volume of carbon emissions and minimisation of waste production. This technology is also helpful in analyzing customer demand patterns for providing accurate results helpful in strategic applications to improve business practice. According to the statement by (Ahmad, et al., 2021), AI guides the authority for effective resource allocation in making decisions in terms of production to meet the market demand and also contributes to maintaining an eco-friendly supply chain process.



Figure 2.4: Challenges in AI integration for sustainability initiatives (Source: Yigitcanlar *et al.* 2021)

In terms of maintaining sustainable initiatives in business practice, AI implementation can have some challenging factors to negatively affect the business operation process. As per the perception of (Yigitcanlar & Cugurullo, 2020), a recent report, it is predicted that by the end of 2030, the e-waste amount will be 74 million. Because of the highly technical application, the device lifespan became shorter to increase the amount of waste rapidly. As per the opinion of (Galaz, et al., 2021), another challenging factor associated with AI implementation in terms of sustainable practice is the higher carbon footprint of different models of AI. For example, "map optimization, machination and machine learning optimization in energy efficiency", guides to improve the carbon footprint to affect the sustainability approach negatively.

Higher resource utilization is another challenge for AI in maintaining a sustainable practice. Data centers use a huge amount of water to maintain the cooling of their system to increase the scarcity of water. In 2022, Google used around "5.2 billion gallons of water" to cool their system, which negatively affected the approach of sustainable practice. In this aspect, the technological integration guides to improve the energy consumption process to affect the sustainable practice approach. As per the opinion of (Galaz, et al., 2021), a problem of bias can also emerge because of AI implementation by the organization in terms of sustainable practices. In terms of data collection of climate science, AI sometimes collects some biased data which leads to incomplete data and missing key perspectives of the company information. In this aspect, AI guides provide different information from different regions as well as communities from a global perspective which leads to unreliable climate predictions. Lack of transparency is another important challenging factor associated with AI implementation in business practice. From the point of view of (Cowls, Tsamados, Taddeo, & Florida, 2021), the AI decision-making process can have a lack of clarity to increase challenges in the identification of errors which negatively affect the potential outcomes. In terms of ethical and social implications, AI

can be unable to grasp logic in terms of accountability of the decision-making process. This problematic situation can negatively affect the legal and healthcare sectors to increase conceal biases to create difficulties in error detection.

Different types of intangible gains by reducing risk factors with the application of AI by increasing brand value. Green technological applications increase operation efficiency to offer automated solutions through the effective optimization of resources.

AI-associated carbon emission process mainly focuses on the demand for considerable energy. In this aspect, "extensive computational power" can be helpful for the development of an approach to the sustainable development of an organization or sector. In terms of costefficiency, this technology guides reducing direct costs by eliminating interdisciplinary needs. According to the writing of (Pan & Zhang, 2021), the application of AI models guides to the improvement of living entities to reduce the financial burden of organizations and sectors. AIdriven solutions will be very helpful in developing "carbon neutrality, waste reduction, or social benefits". In this aspect, AI functions offer diverse opportunities for the development of a sustainable approach in recent business practice.

2.5 Impact of AI in Shaping Future Management Operations, especially in Sustainability Consulting

In the current situation, the international business community considers and acknowledges the importance of AI and it plays a significant role in mitigating all types of sustainability challenges. This technological integration focuses on "environmental, social, and governance (ESG) concerns" to improve the sustainability approach for the development of overall brand value. According to the writing of (Richey Jr, Chowdhury, Davis-Sramek, Giannakis, & Dwivedi, 2023), strategic initiatives implemented by these innovative technologies strive for "net-zero carbon emission commitment" to develop the brand value by maintaining a sustainable approach empowering the business leaders for faster decision-making and taking action for the complex state of climate change. This statement is contracted by (Budhwar, et al., 2023), AI is commonly used for "sustainable decision-making" rather than profitability growth and development of productivity. AI guides to improve the analysis process of huge datasets from sustainable perspectives to overcome different types of actionable insights.

In terms of business operation practices, AI-enabled strategies are very useful in maintaining the proper alignment of investment with the achievement of sustainability goals. For example, "e-mobility and sustainable mobility sectors" use this innovative technology for better optimization of potential routes to reduce carbon footprints by ensuring effective resource distribution and a sustainable sourcing process. It also focuses on strengthening the human role in the enterprise and for this aspect, AI offers "new job roles and skill sets" for maintaining safety and security by assuring faster operation process. According to (Brendel, Mirbabaie, Lembcke, & Hofeditz, 2021), this technology guides the authority to maximize the benefits by maintaining an effective collaboration with all stakeholders, governments, and internal associates. The application of AI in the business makes the business practice more sustainable to ensure "positive impact, fostering collaboration, and translating plans" in terms of future

sustainable goals (Richey Jr, Chowdhury, Davis-Sramek, Giannakis, & Dwivedi, 2023). In terms of shaping the future application of business practices, AI guides to improve by offering better cultural practices, products, and services. Several opportunities are created for the development of the sustainability approach of the business organization.

2.6 PESTLE analysis focusing on shaping AI in business and management consulting

The integration of AI in business practice is influenced by different external factors.

Political

In the global business practice, the government plays an important role in regulating AI policies and standards in the business operation process. According to the statement by (Chatterjee, Rana, Dwivedi, & Baabdullah, 2021), stable political condition fosters the AI adoption process by maintaining a conducive environment. For example, after the Brexit decision, the implementation rate of AI increased as it guided to improvement overall development of the analysis process of data. A significant political interference in the development of business operations, which guides to improvement of critical considerations for business practice along with management consultants.

Economic

Some economic factors also influence AI technologies for the development of sustainable approaches. A stable economic condition, investment opportunities, and funding capabilities are some important factors that influence the AI adoption process (Van Wynsberghe, 2021). The cost-effectiveness of AI solutions is another important factor that affects the business operation process to improve the overall productivity of the organization and the nation.

Social

Social attitudes, values as well as demographics have also played an important role in AI applications. Acceptance of this innovative technology mainly depends on the perception of employees and the ethical framework of the organization (Kaya, et al., 2024). It also has a significant impact on society as it has a significant impact on job replacement for long-term success.

Technological

In this current situation, technological integration smoothens the application of AI in the business process. These cutting-edge technologies guide to improve the operation process for developing a success rate of effective decision-making process. AI maintains a continuous alignment with the technological trends that guide the organization to successfully remain in this competitive business market.

Legal

Different national governments proposed regulations in terms of data protection laws, rights to intellectual property as well as liability issues (Chen, Biswas, & Talukder, 2023). Therefore,

the organization needs to maintain a lawful application of AI by identifying potential liabilities and maintaining safety against all types of legal challenges.

Environmental

In recent times, AI has focused on the sustainability approach by maintaining effective resource optimization and reduction of waste protection. Therefore, in terms of environmental sustainability, this technology has a significant impact.



2.7 Theoretical Framework



This theoretical approach is very effective in maintaining corporate sustainability through the application of innovative technologies. This particular theory guides maintaining an open business operation system by allowing all types of technologies for the development of the operation process. It suggests "organizational systems and the interactions among them" (Meuer, Koelbel, & Hoffmann, 2020), which guides to maintaining a dynamic nature for identifying the dynamic nature of the organization which has a significant impact on corporate growth and profitability. This theory also focused on "environmental protection, social justice, and equity" to maintain a completely sustainable approach.

2.8 Literature gap

After evaluating the overall discussion, some gaps have been identified to negatively affect the outcome of the study. In recent literature, the role of AI in developing sustainable approaches is mentioned rather than its implementation, which creates a gap in this section. Apart from that, the monitoring process along with the capabilities of the organization to implement this innovative technology is not mentioned to create a literature gap in this study.

2.9 Summary

At the end of this section, it is summarised that in the current situation, this technology has several opportunities for the development of sustainable business practices. AI is mainly used for managing complexities of business practices by implementing tools and methodologies to eradicate complexities by facilitating integration. In terms of complex algorithms and data sets, can be improved with the application of AI which leads to a better decision-making process. In terms of managing costs, AI is very helpful in mitigating barriers by adopting AI. This technology guides to improvement energy energy-saving processes by translating significant reductions in company expenses and offers lower compliance costs.

Chapter Three: Research questions and objectives

3.1 Introduction

This chapter includes a detailed description of how AI changes companies that are good for the environment and how management help is changing. This part has the study questions and aims. Because of these goals and questions, researchers are looking into how AI changes ways of being sustainable and giving help.

3.2 Research questions

Q1. How does the use of AI change the way that MBB companies (McKinsey & Company, Boston Consulting Group, and Bain & Company) usually do business, especially when it comes to being green?

Q2. Which issues arise when MBB companies try to incorporate AI-based solutions into their advisory services? What effect do these issues have on the growth of eco-friendly business practices?

Q3. What kinds of changes does AI make to the speed and value of MBB companies' management consulting work? How does this change the effects that clients get in the long run?

Q4. How can MBB companies best use AI to build long-lasting business practices that are ethical, keep customers happy, and guarantee long-term success?

3.3 Justification of Research Questions

Each presented research question is significant enough for discussion of the role of AI in the business growth and accountability landscape. In the current competitive market, shaping business practices based on consumer demand is very necessary (Gill *et al.* 2022). The overall health of the business can be maintained properly by this strategy.

3.4 Research objectives

- To check out how MBB companies (McKinsey & Company, Boston Consulting Group, and Bain & Company) use AI right now to see how it changes how these do consulting work and what these do for customers.
- To critically analyze the role of management advising, list the pros and cons of using AI as well as special emphasis on how it will affect businesses in the long run.
- To evaluate how AI could be used to improve consulting, strengthen relationships with clients, and adjust to how management consulting is changing.

3.5 Justification of research objectives

Researchers are interested in how MBB businesses use AI at the moment. Some examples are Bain & Company, Boston Advisory Group, and McKinsey & Company. These studies will help them figure out how AI changes how they help people and how much their customers trust them. Along with AI in business tips, it is important to think deeply about how it will affect companies over time (Wamba-Taguimdje *et al.* 2020). Plans are in the works to look into how AI could help management experts deal with the fast-paced world of business, get closer to their clients, and give better advice. The things that will be used and how they will change in the future need to be explained in detail.

3.6 Conclusion

The study also looks at the impact that using AI has had and could have in management consulting, especially in MBB companies. Studying how AI changes professional work and connections with clients can help people who are trying to figure out how to work in a field that is always changing.

Chapter Four: Methodology

4.1 Introduction

The determination of the methodology's motivation and suggestions relies vigorously upon the examination approach. This chapter covers the review question, system, information assortment and examination strategies, plan, and moral contemplations that went into this emphasis on the utilization of computer-based intelligence in feasible strategic policies. It is perceived that interpretivism reasoning is utilized as it centers around how individuals decipher and figure out the world. Remarkable thoughts are shut utilizing an inductive methodology, and an unmistakable examination technique makes it conceivable to gather a lot of information. The construction gathers the information through an essential subjective strategy that depends on a meeting. Besides, the sections frame the moral contemplations one ought to take care of in the time directing the examination in light of essential information.

4.2 Research Onion

A collection of ideas and philosophical presuppositions make up Research Onion, influencing how the research questions are interpreted and directing the choice of research methods. The model is comprised of layers that join to give a thorough exploration process. There are various exploration-related benefits to utilizing the Exploration Onion framework. Above all else, it offers a coordinated system for arranging research projects and picking appropriate methodologies and techniques (Alturki, 2021). This helps researchers create more productive outcomes and ensures the exactness of their discoveries. Despite being widely used, the model has certain drawbacks. A drawback of the Saunders Research Onion is that it could be viewed as overly straightforward and fail to adequately convey the intricacies of research methodology.



Figure 4.1: Research Onion (Source: Mardiana, 2020)

There is a qualitative technique to examine the use of AI in sustainable business practices and get further knowledge at the methods layer. It receives inputs on data collection and analysis techniques. The study's findings will provide the bank with a strategy and idea that it can use to improve its tax services while still adhering to international rules (Mardiana, 2020). The research onion offers advantages in that it presents a methodological study's processes for description and establishes a hierarchy of stages under which the various techniques of data collecting can be comprehended.

4.3 Research Philosophy

This research will mostly employ the Interpretivism philosophy. The groundwork of Interpretivism philosophy is the possibility that the truth is socially made, multi-layered, and emotional. interpretivism holds that "objective reality can't exist (Sjödin, 2023)." People's perspectives as well as the social standards and thoughts of the general public they live in shape reality. It fills in as there are different benefits to interpretivism. In any case, it recognizes that human information is logical and grounded in language, empowering specialists to get a comprehension of events by getting implications from them (De Paoli, 2023). Second, in spaces like provincial the travel industry, and local area improvement, interpretivism offers a qualitiesbased structure that develops connections of trust among specialists and members (Alharahsheh, and Pius, 2020). Thirdly, interpretive methodologies in the field of worldwide relations can assist with crossing the understanding of worldwide political patterns and give replies to multifaceted examination issues (Agrawal et al. 2022). Fourthly, interpretivism makes it conceivable to peruse sociology thoughts about legislative issues and culture, creating new exact fields of study and social real factors. As stated by Budianto (2020), interpretivism has added to the deconstruction and reproduction of information by working with the development of hypothetical variety and the investigation of implications, predominance, underestimated voices, stowed away varieties, and options in different areas.

The possibility of Interpretivism philosophy assists in sorting out how with peopling and man-made brainpower (man-made intelligence) cooperate in administration counsel and strategic approaches that are great for the climate. By zeroing in on individuals' encounters and connections with others, interpretivism assists us with sorting out their thought processes about and using AI to assist them with settling on decisions about field-tested strategies and ecological activities (Junjie, and Yingxin, 2022). It is simpler to get a full image of how the administration counseling market is changing when you ponder things like cultural factors, perspectives on partners, and moral worries. Interpretivism is a way for scientists to glean some significant experience about the convoluted associations between simulated intelligence, maintainability, and the executive's exhortation.

4.4 Research Approach

Inductive Approach is going to be mainly used for this research. As per statements of Yigitcanlar (2021), the first step in the inductive technique is for a researcher to gather pertinent data for the investigation. Following data gathering, a researcher will conduct a thorough analysis of the data, searching for trends that could lead to the development of a hypothesis (De Paoli, 2023). By creating summary themes or categories from the raw data, inductive techniques aim to facilitate the interpretation of meaning in complex data (Sjödin, 2023). The inductive approach is valuable for various reasons. Since it might provide the specialist with a ton of adaptability in inductive research due to less previous literature the reason to choose this method is important. Also, another reason for using inductive research is a proper way to find patterns regarding research aim and objective can be known. With the utilization of inductive examination's information-focused technique, one can find designs in an informational index and reach coherent determinations about what prompted them, as well as how to one or the other help or go against them as needs be.



Figure 4.2: Inductive vs Deductive Approach (Source: Varpio et al., 2020)

The inductive approach is great for investigating the research since it allows one to begin from the base and move gradually up. This approach to doing things makes it simpler to track down patterns, examples, and thoughts regarding what simulated intelligence means for manageability and board counseling by gathering and taking a gander at genuine instances of AI use in many fields (Varpio et al., 2020). Find out about how man-made intelligence is being utilized to pursue choices better, run organizations all the more effectively, and obtain enduring outcomes is more clear. Organizations and board specialists can utilize this data to make better essential decisions.

4.5 Research Design

The researcher utilizes the "*Exploratory research design*" to execute the research study. In exploratory research design, the researcher looks into a topic to find out more about it, find variables, and make ideas, however, the researcher does not know what the results will be (Mhlanga, 2021). It is very important to utilize an exploratory study design when the researcher wants to find out how AI changes management tips and how AI affects sustainable business practices. AI's use in business and management advice is still new and changing, so preliminary research is necessary to fully understand this complex and wide-ranging field. According to Dzwigol (2022), people who do exploratory studies can come up with new ideas and points of view that have not been thought of before. Therefore, researchers can utilize this method to look into the different ways AI can be used in sustainable business practices. For example, predictive analytics can be used to make the best use of resources, and technology powered by AI can help cut down on carbon emissions. Lots of basic studies can help researchers find new trends and problems that might come up when AI and sustainability meet.



Figure 4.3: Types of research design (Source: Dzwigol, 2022)

Moreover, this begins the process of doing more research. Researchers are also learning more about how AI and management tips work together through exploratory studies. Both consultants and academics need to keep up with how AI is changing the area of standard consulting. Focus groups or talks with experts and advisors in the field are good ways for researchers to find out what they think. This helps them understand how AI is changing how they work with clients, make strategic choices, and give advice. This database has a lot of different kinds of information that helps experts find secret patterns and figure out how AI is being used in consulting firms (Säfsten & Gustavsson, 2020). It also gets people from different fields to work together and share what they know. This method lets researchers from various fields, such as computer science, business, and environmental studies, work together and use their skills. This is because AI affects many areas, such as sustainability and management consulting.

Combining ideas from different fields is what exploratory research does to get past narrow points of view. As a whole, it shows all the different impacts of using AI in business and coaching. However, researchers should know that exploratory research has some flaws, such as the fact that it uses small samples and is not meant to be applied to the whole population. To get around these issues, researchers can use both exploratory and confirmatory research methods to back up their original findings and find links between events.

Exploratory research methods include tests and ongoing studies. Therefore, it can be stated that exploratory research design is needed to find out how AI changes management advice and how it affects environmentally friendly business practices. Research that helps people come up with ideas, understand things better, and work together with people from different fields is an important part of learning more about this new area.

4.6 Data Collection Method

The researcher utilized a qualitative method to conduct the research study. The quantitative method is an important way of collecting information statistically with significant information from existing potential customers. This is the process of getting original data from the source, such as through polls, conversations, notes, tests, and more. The researcher conducted an interview session, made up of 10 questions, with 15 employees. Furthermore, it is important to use first-hand data collection methods when looking into how AI changes sustainable business practices and how management advice is changing. Real-time ideas and experiences from important people, like business leaders, experts, and AI writers, can be recorded using this method (Saliya, 2023). For this reason, talks are a great way to get information from real people. Researchers can learn a lot about how AI is used and what it means for consulting strategies and the long-term health of a company by conducting either organized or unstructured conversations with consultants who specialize in integrating AI and using sustainable business practices. It is great that interviews are fluid, so researchers can change the questions they ask based on what the people they talk to know and think. Given that AI is adaptable, experts can look into a wide range of parts of its role in long-term business success and consulting relationships.



Figure 4.4: Data collection methods (Source: Saliya, 2023)

This gives them more complicated views that they might not get from other ways of gathering info.

They can also make their results more reliable by checking them against data from three or more sources. Therefore, it can be stated that interviews are a great way to get fresh data that can be used to study how AI is changing management advice and environmentally friendly business practices. Researchers can learn more about the pros, cons, and moral issues that come up with using AI by talking to people who have a stake in the problem. This helps them decide what to do and adds to what is known in the field.

4.7 Sampling Method

The researcher utilized a random *sampling method*" to conduct the research study. Picking people at random from a group means that each person has an equal chance of being chosen. The researcher should use random sample methods if the researcher wants to find out how AI changes sustainable business practices and how management advice is changing. In this way, the group is more likely to represent the whole population of interest. This makes the study results more accurate and useful in other cases. Random sampling can help get rid of sampling bias, which makes the results of a study more reliable. In AI and business tips, random sampling makes it less likely that whole groups of people or certain points of view will be left out of the study. Being open about how different people see and use AI tools in different work settings is very important (Budianto, 2020). Also, the random selection makes the statistical strength of the study data better. In this way, experts can draw stronger and more reasonable conclusions about the link between using AI and using sustainable business practices or strategies for management advice.

Moving ahead, random sampling lowers the risk of over- or underrepresenting certain groups by giving everyone in the community an equal chance of being picked. These changes improve the accuracy of predictions and effect amounts. Random picking also makes study results more reliable because the group is more likely to be like the whole community (Gupta & Gupta, 2022). Building a body of knowledge and making it easier to compare studies is very important. This will help us learn more about how AI affects the ability of businesses to stay in business and how advising works. Also, random selection is moral because it treats all possible members the same and fairly.



Figure 4.5: Sampling methods (Source:Gupta & Gupta, 2022)

Researchers support the ideals of fairness and respect for people's rights by not using unfair ways to choose participants. The participants selected for this research process are employees working in consulting companies. Each of the participants will be invited randomly for the survey process by providing an invitation link to the company portal. Whoever wants to join the survey can accept the offer and be a participant in the research. Around **15** participants will be selected for the survey process. As a result, people are more likely to believe the research method. However, it can be hard to use random sampling when the group the researcher wants to sample is big or spread out geographically. If experts want to get more done while still following the rules of chance, they may need to use stratified or cluster sampling. Researchers need to utilize random sampling to do a thorough and useful study on the role of AI in making business practices and management tips that last. As this field grows, random sampling helps make strong proof that companies can use it to make decisions (Zawacki-Richter et al., 2020).

4.8 Data collection process

The following research data collection process was collected on the first week of April whereby all the survey responses were accordingly collected. Each of the data was collected via an online Google form for gathering response data. A total of 10 questions were there in the survey that needed to be answered by each of the selected participants. A total of 10 minutes is required to complete the survey for each of the participants depending upon their responses.

4.9 Data Analysis

Data analysis is the process of looking at, cleaning, changing, and examining data to find patterns, trends, and insights that are important to the study's goals. Using thematic coding or content analysis, researchers can organize survey answers about AI adoption, long-term strategies, and advice practices into topics that are important to the research. This method helps researchers find similarities and differences between users' points of view. This gives them deep qualitative insights into how AI and business advice work together, which is a difficult area. Analysts of data can also look into the details of how AI changes environmentally friendly business practices and management tips. Studying conversation records word-forword helps researchers learn what makes people want to use AI, what stops them, and how to use AI in a way that lasts.

Researchers now have a better understanding of AI's many effects due to this in-depth study. It also helps businesses make decisions based on facts as they manage this changing world. Also, researchers can use data analysis to see how interview results fit in with current theoretical frameworks and empirical papers. Furthermore, researchers can add to the academic conversation about AI's role in business and consulting settings by making connections between interview data and theories about how people adopt new technologies, how organizations change, or how people make moral decisions (Dodds & Hess, 2020). On the other hand, researchers should be aware of the issues and limits that can come with data analysis. For example, researchers are biased, data interpretation is subjective, and qualitative data is hard to understand. Inter-coder reliability checks, and clear sharing of the analysis methods they used to get around these issues, researchers can make their results stronger and more reliable by member checking with subjects. Finally, to get useful information from interview data and find out more about how AI is changing sustainable business practices and management tips, the researcher needs to analyze the data. There are a lot of qualitative data sets that researchers can look through carefully to find important trends, new theories, and strategies that can help businesses deal with the changing world of AI-driven innovation.

4.10 Ethical Consideration

Informed consent: One important moral problem is making sure that people agree after being fully informed. Before interviewing people, researchers must tell them the full story of the study's goal, methods, risks, and benefits. Therefore, people can choose to take part freely and know what is going on. Furthermore, it is important to get educated permission because it includes talking about private or sensitive things to study AI. Therefore, the member's right to privacy and freedom of choice is protected.

Data privacy: Researchers must also always follow the rules of privacy and secrecy while the study is going on. This research adheres to the ethical research guidelines of **NCI** and **GDPR**. Interviewers' privacy should be respected, thus, academics should ensure that interview data are kept safe and that only people who are not interviewers can see them. Researchers need to

be careful not to give away private or secret information that could hurt people or businesses when they talk about their findings.

Diverse perspectives: Another moral problem is how to fairly show how different goals and points of view work. AI technologies may affect and be accessible to different groups in different ways. Because of this, researchers should try to include the opinions of groups that are not well-represented in their studies.

Lack of bias: Researchers can reduce bias and make sure that the results of their studies are true to the people who will be affected by AI advances by actively seeking diversity in both the people they hire as subjects and the people who look at the data. Also, researchers should always be on the lookout for biases or conflicts of interest that might make their data less reliable. This means being honest about any jobs, funding sources, or ties that could affect the study or its results. Being open and honest helps researchers keep the credibility of their work in the eyes of both their academic peers and people who have a vested interest in the work. Aside from that, experts should think about how their findings might change society and virtue.

Therefore, it can be stated that any ethical issues that might come up as AI continues to change business and professional work need to be thought about ahead of time and solved by researchers. Job loss, machine bias, and making social and economic gaps worse are some of these problems. Talking about how their work impacts society as a whole carefully and critically can help AI experts make AI apps and policies that are more moral. In the end, ethics should be the most important thing to think about when looking into how AI affects management experts and sustainable business practices. Ethical researchers can make sure that their work advances knowledge while also protecting everyone's rights and well-being. They can do this by putting informed consent, privacy, diversity, openness, and the effect on society at the top of their list of priorities.

4.11 Summary

This chapter pays a lot of attention to how the research method affects the goal and results of the study. It has the exploration question, the technique, the strategies for gathering and investigating information, the arrangement, and a few moral worries. The primary spotlight is on how simulated intelligence can be utilized in strategic approaches that are great for the climate. The possibility of interpretivism can assist you with sorting out how various individuals see and act on the planet. It is essential to recall that the inductive strategy is utilized to discuss fundamental thoughts, while the inquiry technique is utilized to get the real factors. Interviews are a subjective strategy that is spread out in the system. This is finished to ensure that moral issues are appropriately and thoroughly examined throughout the entire examination project.

Chapter Five: Findings and Analysis

5.1 Introduction

This research study discusses the role of AI in supporting sustainable business practices. Thus, the information in this part, which goes over the hard steps of utilizing AI in business, came from in-depth discussions with 15 consultants. This study's main goal is to utilize interviewees' answers to show how AI can help improve things, help people make decisions, and come up with new ideas. In addition, it looks at how management advice has changed because AI can change things. Moreover, understanding how technology and advice work together to make long-lasting changes in business is very important. The abbreviation in the below table is identified as senior consultant presented as SC, engagement manager as EM, and associate as A. 1-5 is abbreviated with low to high as knowledge of using AI.

Participants	Codename	Age	Experience level	Knowledge of using AI
1	A1	25	Associate	4
2	A2	27	Associate	4
3	A3	27	Associate	5
4	SC1	29	Senior Consultant	5
5	SC2	35	Senior Consultant	3
6	SC3	37	Senior Consultant	3
7	EM1	41	Engagement Manager	4
8	EM2	45	Engagement Manager	2
9	A4	29	Associate	4
10	EM3	45	Engagement Manager	1
11	EM4	49	Engagement Manager	1
12	SC4	32	Senior Consultant	3
13	A5	28	Associate	4
14	EM5	51	Engagement Manager	1
15	SC5	33	Senior Consultant	4

Participant demographics

 Table 1 Particpant demographic

(Source: Self-developed)

5.2 Primary data findings and analysis

Impact of AI on Developing Sustainable Business Practices:

AI technology has been shown up to be a revolutionary power for providing sustainable business practices in different sectors of the economy. A4 states that AI implementation is an important requirement within business for sustainability. It ultimately helps to improve business processes and helps in better workflow with proper managerial processes and effective internal development processes. AI's predictive analytics models enthuse sustainability visions, providing an organization with the capability to track and measure their environmental impacts in real-time. Data scientists and AI specialists point out the significance of AI in monitoring and analyzing data with accuracy of decision making which is being used by businesses that depend on strategic decisions for sustainability. EM1 on the side says that the use of AI in business has resulted in affecting the quality and staff management. It has increased employee layoffs and reduced the work culture and stability of workers. Business development managers and industry analysts say that AI helps to implement greener product development and facilitates the guidance of opportunities towards eco-friendly activities in the marketplace as well.

Current Trends, Challenges, and Opportunities:

The evidenced evidence of AI usage for sustainability activities across sectors is perceivable. Sustainability consultants are pointing out that AI with its capability to optimize resource management and track environmental impact gives us tangible ideas on how to be eco-friendly in operation. Nevertheless, organizations are subject to problems like data quality, a dearth of AI specialists, and questions about algorithm biases. A4 stated that AI has helped in analyzing the business process and managing each of the points effectively and smoothly. Frequent model evaluation and adoption of standardized metrics are required to overcome these difficulties. Notwithstanding the chances of applying AI for predictive modeling, sustainability, and innovativeness are still galore. AI is an integral part of CSR initiatives that are targeted; at efficient logistic systems; and smart green technologies which allow companies to diversify and contribute to saving the planet. SC5 stated that AI is an important technology and is a sustainable business practice affecting overall business growth.

AI in Shaping Future Management Operations:

AI is one of the key factors that determine the transformation of consultation management while sustainability is being implicated. AI practitioners, energy management experts, and technology innovators emphasize that predictive analytics enable energy conservation and waste reduction, which in turn makes smart grids and places capable of storing and releasing energy only when required. Simultaneously an assimilation of AI into management consulting dictates a more refined planning and decision-making involved in sustainability projects. AI leaders and managers in business development along with AI and sustainability thought leaders believe that AI can be a transformation catalyst. They point to advanced research and innovations the AI technology could come up with to fight environmental problems and provide resource management for sustainable development purposes. E1 on the other side states that the use of AI has highly discouraged employee work culture and ultimately hampered work quality.

PESTLE Analysis Focusing on AI in Business and Management Consulting:

Political, economic, social, juridical, and environmental issues play the role of determinants of the introduction and regulation of AI technologies within particular industries. It is the political priorities that direct the strategic nature of AI development and ethical AI standards and it is the economic considerations that concentrate on cost-effectiveness and long-term ROI. Social perceptions and demographics are among the major factors that drive AI acceptance levels, shifting the way AI sustainability strategies are formulated. Legal obstacles which consist of data privacy issues and frequently changing laws force organizations to traverse the everchanging terrariums. Resource optimization and emissions reduction remain at the core of the

environmental influence on AI adoption. Generally, AI's virtues of environmental efficiency and sustainable development indicate a highly anticipated direction for companies that want to improve their sustainability performances.

5.3 Comparative Analysis

This section compares the primary data findings of this research with existing studies to contextualize the impact of AI in shaping sustainable business practices within the management consulting industry.

1. AI's Role in Enhancing Decision-Making and Efficiency

Our research findings indicate that AI significantly enhances decision-making processes and operational efficiency within management consulting firms. This is consistent with the findings of Gupta and George (2021), who reported that AI tools streamline decision-making by providing data-driven insights that reduce the time and complexity involved in strategic planning. Similarly, Jones et al. (2022) highlighted that AI applications in data analysis foster more efficient business operations by automating routine tasks and optimizing resource allocation.

2. Sustainability and Environmental Impact

Our interviews suggest that AI contributes to sustainability by improving environmental monitoring and promoting energy efficiency. These findings resonate with those of Lee and Choi (2020), who demonstrated how AI helps companies achieve their sustainability goals by optimizing energy use and reducing waste. However, our study extends these findings by illustrating specific instances where AI directly influences sustainability strategies in consulting firms, a nuance less emphasized in the broader literature.

3. Challenges and Risks Associated with AI

Consistent with the literature, our findings also underscore several AI-related challenges, such as data privacy concerns and the risk of algorithmic bias (Smith and Davenport, 2021; Zhang et al., 2023). While these issues are well-documented in the academic domain, our research provides a practical perspective on how these challenges manifest in real-world settings, particularly within the sustainability consulting context.

Conclusion

The comparative analysis confirms that while the findings of this study are largely in alignment with existing research, they also contribute new insights into the specific applications of AI in the management consulting sector, particularly in the context of sustainability. This underscores the value of AI in not only enhancing business operations but also in driving sustainable business practices.

5.4 Discussion

Through AI, MBB(McKinsey & Company, Boston Consulting Group, and Bain Company) firms have embraced data mining and modeled predictions, which have helped deliver a differentiated set of an enhanced suite of consultancy services.

AI in functioning as advisors is efficiency-based but may have an ethical challenge and also may contradict human interactions. The ability of AI to analyze information intensifies advisory services through the provision of data-driven assumptions, creating clients' faith and adapting to changes in industries.

1. Through AI, MBB(McKinsey & Company, Boston Consulting Group, and Bain company) firms have embraced data mining and modeled predictions, which have helped deliver a differentiated set of an enhanced suite of consultancy services:

People who know a lot about how AI is changing in many areas can talk about how AI is changing the way businesses work and how management help is changing. There were in-depth interviews with a lot of professionals, including Chief Sustainability Officers, AI and Sustainability Consultants, Data Scientists, and more. Several important ideas came up in the talks. Moreover, people who took the interview say that AI-powered solutions are becoming more popular in areas like green energy systems, agriculture that is more precise, and prediction analytics that help figure out how dangerous climate change is. These new concepts not only improve how things are done, but, they also help achieve long-term green goals. But the talk also acknowledges the need to be careful about how AI affects society and the economy. People are afraid that technology will make injustice worse, take away jobs, and make AI programs biased. There are fewer risks if companies use AI in a responsible way that prioritizes openness, responsibility, and inclusiveness.

Moving ahead, people who answered think AI will change management consulting methods more and more, especially when it comes to being environmentally friendly. Moreover, according to Bedué & Fritzsche (2022), AI can help businesses become more eco-friendly in the way they run their operations. Businesses can deal with tough environmental issues with the help of AI, which allows them to use data to make decisions and make sure that investments are in line with sustainable goals. Furthermore, it is also emphasized in the interview discussion that to make AI more sustainable, people need to think about the bigger issues of politics, the economy, society, the law, and the environment that arise when AI is used. Therefore, it can be stated that the use of AI can be helped or hurt by political factors like government laws and rules (Kulkov, 2023). In addition, businesses think about many things, such as the costs and benefits and how the market is changing before putting money into AI. Most importantly, how people accept and utilize AI for environmental projects is also shaped by their ideas and cultures (Iyer, 2021). Therefore, the interview discussion, with the 15 consultants, shows how AI can change how businesses work and how modern management advice fits in. AI has problems that need to be fixed before it can be used fairly and smartly. It could help people get new ideas and do things better. This discussion takes a close look at how AI affects different areas, which helps groups and leaders who want to utilize AI for long-term growth.

2. AI in functioning as advisors is efficiency-based but may have an ethical challenge and also may contradict human interactions:

The study succeeds in proving the role that Artificial Intelligence methods may play in altering business modus operandi. The consultation between the management and the consultants is done by way of profound discussions with gurus from almost every area. This research wanted to know how AI has changed the working structure of main consulting firms. For instance, it

is commonplace with Bain & Company, McKinsey & Company, and Boston Consulting Group. Furthermore, he went in-depth on what benefits AI brings about in consulting in addition to the technical problems it encounters and how it will eventually change the industry for the better. It is necessary to know what the results are because they show how AI process changes environmental management songs and these conclusions in the advice in many ways. AI technologies have a great significance in contributing multi-dimensional support in sustainable growth efforts, though this is still shown in the study. The report of Wamba-Taguimdje et al. (2022), the professionals who are working together in AI to help people to choose better for the environment and improve supply chain management could be the Chief Sustainability Officers, AI and Sustainability Consultants, and, Data Scientists. The question that was researched is what impacts AI makes on the sustainability of business practices. C4 states that the AI process provides new ways of managing work and reduces workload effectively. Employees can accordingly work without taking much burden.

Moving ahead, these examples show how AI can be utilized in different ways to deal with tough environmental issues such as climate change, resource loss, and damage to the environment. The study also shows how hard it can be to use AI in long-term ways, even though it does look like it could have some benefits. Tas per the viewpoint of Tavoletti et al. (2022), three big problems arise: keeping data safe, not having enough trained AI professionals, and the high costs of putting AI into use. Furthermore, these issues mean that leaders of both businesses and governments need to work together to make sure that AI technologies are used in a fair and equal way. Also, these results show that AI is being used more and more for environmental projects, especially for AI-powered solutions in areas like green energy systems, exact farming, and prediction analytics for figuring out how dangerous climate change is. Apart from this, the point of the study was to find out how AI is working in environmental projects now and what new options are coming up. AI could be used to help reach green goals and spark new ideas.

However, the study does stress how important it is to watch how it impacts business and society. Individuals are concerned that AI systems could be biased, that they could make inequality worse, and that they could eliminate jobs. The study suggests that if businesses want to lower these risks and make sure that everyone can utilize AI properly, we need to be responsible and stress openness and inclusivity. Therefore, this research also shows how AI is changing management advice, especially when it comes to helping the environment. An awful lot of professionals believe that AI will help companies choose actions that are better for the environment and make sure that the money they spend fits with their long-term environmental goals. The study shows that there may be good and bad things about using AI in green projects. It also stresses how important it is to use AI fairly and honestly. Researchers want to find ways that AI can improve consulting services and adapt to changing business consulting environments; this fits with that goal. According to Schrettenbrunner (2020), there are also bigger problems like political, economic, social, legal, and environmental ones that affect the use of AI for green projects that are brought up in the study.

3. The ability of AI to analyze information intensifies advisory services through the provision of data-driven assumptions, creating clients' faith and adapting to changes in industries:

The usage of artificial intelligence in advising companies increases effectiveness in an enormous way involving data analytics. AI algorithms are capable of working with a large number of data points that can be territorialized to identify even the most overlooked patterns or trends. Thus this evidence-based method provides consultants with the ability to make sounder assumptions and suggestions supported by data rather than relying solely on their intuition.

Furthermore, including AI in the advisory process enhances clients' confidence due to various factors such as an accurate and reliable decision-making process. Clients are at ease knowing that they can rely on the accuracy and reliability of AI-generated diagnostics, thereby leading to increased trust in the consultancy firm's counsel. C1 states that the AI process provides a better way to understand work management and accordingly gives a proper view of new processes and helps in managing better business growth. However, SC3 speaks that both positive and negative outcomes can be noticed through AI implementation in business processes. As a result, AI has helped and also hampered work culture and business progress negatively.

Moreover, advisory services are now capable of changing quickly in times of any industryrelated or market-orientation fluctuations due to AI. By constantly analyzing data and tracking emerging trends, the AI systems can alert the consultants with feedback regarding available opportunities or potential risks. This eventually allows the consultancy to adjust its plans in real-time. For this reason, the very nature of the organization should be focused not only on the inability to respond to current market dynamics but also on the ability to respond and change at the speed at which the business environment is changing.

In other words, AI improves advising by generating data-based assumptions, strengthening customers' trust in them, and facilitating the adaptive nature of consultants in response to the challenges of the changing industries. The incomposition of AI reinforces the consultancy firms' value proposition, and, consequently, clients' businesses improve overall. It puts consultants in a good position as a strategic partner of their client's success.

It shows how government safety, economic factors like business opportunities, and social views affect how AI is accepted and used for long-term goals. The study used the PESTLE method to look at how outside factors impact AI in business and management consulting. These points fit with that method. It uses the System Theory of Corporate Sustainability and other theories to understand how AI can help businesses be more environmentally friendly. The theory stresses the importance of keeping business systems and trades open to protect the environment, support social justice, and make sure that everyone is treated fairly. The study was mostly about how AI affects the longevity of businesses. Therefore, it can be stated that the research study results discuss a lot about how AI, environmentally friendly business methods, and management tips all work together. AI has a lot of potential to spur innovation and help reach long-term goals, however, putting it to use causes problems that need to be fixed by everyone working together (Okrepilov et al., 2022). Therefore, it can be stated that the study

helps fully understand how AI is changing successful businesses and the work of management experts by looking at current issues, problems, and opportunities.

5.4 Summary

Based on the above statement, it can be stated that the discussion and analysis section looks at how AI is changing management advice and pushing companies to be more eco-friendly. The study, which is based on interviews with 15 experienced consultants, shows how hard it is to use AI in business. The theme analysis in the study shows that AI can help people make better choices, come up with new ideas, and make the world a better place. The research study looks at how AI has changed management tips and what businesses can learn from this about how technology can make changes that last. AI has the potential to help the environment and make supply lines more efficient, but it has issues like not being able to protect data, a lack of skilled workers, and high costs to use. Additionally, the research looks at how AI is growing in importance in environmental projects, mainly in the areas of green energy systems and climate change prediction analytics. It is important to be smart about how businesses use AI and work together to make sure everyone wins. Therefore, it can be stated that the study helps learn more about how AI is changing management advice and how it can be used to protect the environment.

Chapter Six: Discussion

6.1 Introduction

"The Role of AI in Shaping Sustainable Business Practices and the Evolving Landscape of Management Consulting" is the study's title. To begin the discussion part, an outline of the study's impacts and outcomes is given. The article displays how AI is altering management techniques and long-term business methods in today's busy business world. It says in the first line of the study's purpose: to look at how companies use AI, what that means for efforts to protect the environment, and how the role of management experts is changing in places where AI is used. The main ideas and themes are in the next sections to learn more about the links between AI, sustainability, and management consulting. Also, they should think about what this means for their further study and work.

6.2 Impactful strategies of AI in sustainable business practices of MBB firms

AI has changed how global management consulting firms like McKinsey, Boston Consulting Group (BCG), and Bain & Company (MBB) do business in a way that is good for the environment. Since these companies use AI, they can do the following good things for the environment.





- Decision-making approach by data-driven management: Businesses in MBB can use AI to make decisions based on data. This helps them share resources, run more efficiently, and have less of an effect on the environment. Robots with AI sort through huge amounts of data to find eco-friendly ways to do things like using less energy, making supply lines work better, and finding places to reduce waste.
- Sustainability-related predictive analysis: MBB businesses can use AI-powered advanced predictive analytics to find and plan for future trends and risks in sustainability (Ferreira Junior *et al.* 2022). They can avoid trouble this way. These tools let you see how the market, rules, and world around you will change in the future. This information can help companies make long-term plans that will help them deal with problems in the future.
- Smart resource management: Media and TV companies can make the most of their resources with the help of AI-powered tools. This cuts down on waste and promotes sustainability. By looking at how people plan their days, AI software can find the best ways to get from one place to another. This lessens the amount of carbon dioxide that work trips give off. Electricity use can be controlled by AI technology that changes the lights, heat, and air conditioning in buildings depending on use and weather (de la Cruz Jara *et al.* 2024). This technology can also save energy on its own.

• Effective supply chain optimization: AI makes it easier to buy things, move things, and run shops, which is good for the supply chain. Find suppliers that care about the environment with machine learning (Tavoletti *et al.* 2022). Rate suppliers' work based on environmental standards. Merge and improve shipping lines to save resources.

An important part of how MBB companies do business in a way that is good for the world is with AI. Businesses that use MBB can help make the future more sustainable by using AI to make predictions, making decisions based on data, being resource efficient, making sure their supply chains are sustainable, lowering their carbon footprints, helping the community, and coming up with new ways to help customers.

6.3 Detailed analysis of the companies's AI application strategies

AI apps are used by a lot of big companies, like Google, Amazon, and Microsoft. AI helps Apple make cars that can drive themselves, understand words, and do personalized searches. Voice recognition, navigation systems, and making things work better are all things that Amazon uses AI for (Borges *et al.* 2021). Most of what Microsoft wants are AI apps for cloud work, business tools, and health care ideas. These businesses spent a lot of money on research and development to be able to use AI in their goods and services. It helps them come up with new ideas and make their business better.

• McKinsey & Company

An important business advising group known as McKinsey & Company has been working to be more eco-friendly and help companies adapt to how AI is changing the world. As part of their advice service, McKinsey helps people make plans for how to be sustainable (Iaia *et al.* 2024). Green clients who want to be socially responsible can use it to plan for their future income. Businesses can learn more about business trends, risks, and chances with the help of AI and data analytics. This lets them give better advice to their clients. McKinsey also works with leaders and groups to plan projects that help the environment (Kitsios and Kamariotou, 2021). This is something they keep doing as part of their work to help the economy turn less on carbon and get businesses to be more eco-friendly. With long-term goals, AI, and a lot of experience, McKinsey stays on top of all the good changes in business and makes the most of how management consulting is changing.

• Boston Consulting Group (BCG)

The Boston Consulting Group (BCG) does more than just practice better environmental methods. Furthermore, it examines how suggestions for management are changing. Environmental, social, and governance (ESGs) are important to BCG's clients, and the company promotes good business practices. This business utilizes AI and large amounts of data to discover environmental risks, streamline tasks, and share fresh concepts. For companies, working with BCG's clients builds long-lasting business models, improves supply chains, and raises the bar for their environmental reports (Haleem *et al.* 2022). BCG also helps clients by navigating legal frameworks, considering partners' needs, and adding sustainability to how businesses think and work. Businesses like BCG can help their clients with environmental

problems and adapt to changes in the management consulting field because it uses AI to learn new things and makes environmental issues a big part of its consulting services.

• Bain & Company

Businesses know that Bain & Company gives great support. These people want companies to change with the times and do eco-friendly things. Bain helps clients make plans for how to deal with ESG (environmental, social, and governance) issues as part of its planning services. These services know how to be good to the world. The business uses advanced analytics and AI to look at data about sustainability, like how to make processes better and come up with new ideas (Wamba-Taguimdje *et al.* 2020). For its clients, Bain helps them make long-term business plans that cut down on energy costs, improve supply chains, and make businesses better for the environment. Bain helps its clients make the control structures, risk management methods, and ways of involving partners in their businesses last longer. Leading the way to make business better is how Bain manages the field of management consulting, which is always changing. To do this, AI is used to gather data and make advice that is more environmentally friendly in a big way.

6.4 Current trends of AI integration

Companies all over the world are going through a lot of big changes as AI is quickly adopted.



(Source: Sestino and De Mauro, 2022)

• AI application in the healthcare system: In healthcare, AI is changing things by allowing for more accurate tests, more personalized treatment plans, and data that can tell us what will happen in the future. Machine learning software looks for patterns and trends in huge amounts of data about patients. This helps doctors find illnesses, guess how patients will react to treatment, and make better care plans (Campbell *et al.* 2020).

Medical imaging tools that use AI, like MRI and CT scans, can make diagnoses more accurate and more quickly. This means that patients get better care and have better results.

- AI application in finance marketing: Banking companies use AI to find scams, judge risk, and trade on their own. Every day, computer programs called machine learning algorithms look at recent financial data to find odd trends and stop fake deals. Models that use deep learning to predict the future of data look at market trends and risk factors to help banks make smart business choices with lower risk. Virtual helpers and apps that use AI also make banking easier and customer service better (Knox, 2020).
- AI application in Retail management: AI is changing retail because it makes it easier to handle goods, gives buyers a more personalized experience, and speeds up the supply chain (Reim *et al.* 2020). Advice engines driven by AI look at what customers think and what they buy to come up with unique product ideas. Customers will be happy, and sales will go up. Models that use AI to predict demand also find the best stock levels, eliminate stock-outs, and lower the costs of having too much inventory (Eriksson *et al.* 2020). Logistics and supply chain management work better and cost less when AI systems plan routes, run offices, and help with last-mile travel.
- AI application in manufacturing management: AI is making predictions about upkeep, quality control, and process growth, which is changing the business world. Cognitive AI can look at data from monitors on equipment to help systems that do predictive maintenance find and fix problems before they happen. This cuts down on downtime and makes people more productive. Real-time computer vision systems that are powered by AI check the quality of things on the production line to find flaws and other problems. AI-powered planning tools also improve the efficiency of production methods, plans, and the sharing of resources so that less is lost.
- AI application in Education system: Personalizing lessons, getting rid of boring jobs, and improving student success are all things that AI is changing in education. Learning systems that are flexible and run on AI look at each student's academic records to change the content and speed of the lessons to fit their needs. Kids will have more fun learning and do better in school. Smart robots and virtual teachers can help and guide students one-on-one, which makes learning easier and more effective (Gill *et al.* 2022). Management tools that use AI also do boring things like planning, reviewing, and setting lessons. They can spend more time getting to know their kids.
- AI application in cybersecurity management: AI is being used more and more by security companies to quickly find and stop online risks. Hacks can be found by looking for trends in network data and user behavior using machine learning. Systems that keep an eye on risks and respond to events are easier to use when they are driven by artificial intelligence (AI). This makes it easy for businesses to find and fix security holes fast. Body data and trends of behavior are better ways for AI-based recognition systems to check user IDs and stop unauthorized access.

6.5 AI's application in the growing business management consulting

A lot of the help we give to business owners these days is based on AI. This changes most of the ways help is given and makes their services better in many important ways.



Figure 6.3: AI's most beneficial applications (Source: Gursoy *et al.* 2023)

- A key insight of data analytics: Analytics tools that are driven by AI let management consulting firms look at a lot of data from different sources and figure out what it all means. This book has useful facts and thoughts for people. An AI tool called machine learning can look through data to find patterns, trends, and ties. This information can help people who work in the field decide what to do and how to best serve their clients.
- Forecasting and strategic planning: AI systems keep an eye on how the market changes, how competitors act, and customer trends so that managers can make great plans and estimates. Natural Language Processing (NLP) tools let experts learn useful things from texts like blog posts, news stories, and industry reports. This helps them pick the right jobs (Han *et al.* 2023). AI is used in tools that help us plan for the future to try to guess what people will want, how well sales will go, and how much money we will make. Customers can use this information to better run their businesses and get the most out of the things they own.
- Automation and process optimization: By making processes easier and better, machine learning and AI technologies help management consulting companies do their normal work and understand it better. The speed and efficiency of things get better with these changes. Automated process automation (RPA) does everyday jobs like entering data, making reports, and keeping track of papers.
- **Relationship management and client engagement:** Customer Relationship Management (CRM) tools that are driven by AI can help marketing firms connect with customers better and keep track of their relationships with them. Virtual helpers and smart robots can help clients in a way that no one else can. In real time, they can meet

with customers, answer their questions, and give them useful information (Flavián and Casaló, 2021).

- Effective risk management: Business managers need to be careful, follow the rules, and deal with risks because they run a business. AI can help business leaders find these risks and make them less likely to happen. AI-based risk assessment tools look at a lot of different types of data to find possible problems and places where things could go wrong.
- Effective talent management: Talent management tools that are driven by AI can help management consulting companies find the best candidates, make the workplace more open and diverse, and speed up the hiring process. AI software reads job descriptions, papers, and profiles of possible people to find the best ones and decide if they'd be a good fit for the business (Jung *et al.* 2021).

6.6 Current challenges of AI integration

Most of the time, companies need to fix problems that come up when they use artificial intelligence (AI).





• Low availability of quality data: Making sure that the data is correct and easy to access is one of the hardest parts of adding AI. So that they can learn how to work well and give correct answers, machine learning programs need a lot of good data. Data that is missing, wrong, or biased can be a problem for businesses sometimes. Whenever this happens, AI models might not work right and give bad results (Armour and Sako, 2020). There are also still problems with AI because it's hard to get the right data from different sources while keeping that data safe and private.

- Ethical and bias concern: Some AI systems may make flaws in the data they were trained on even worse if you are worried about ethics and bias. The results and choices that come from these acts might not be fair. To make AI systems more fair, clear, and sensitive, we need to think about ethics and make them less biased (Loureiro *et al.* 2021). Businesses need to deal with these problems by using tools like ways to find and avoid bias, training data sets that are representative of the population, and honest AI models.
- Explain ability and interpretability: "Black-box" models made by AI are very difficult and hard to learn and explain. So that things stay clear, trust is built, and the law is followed, it is important to know how AI models make decisions. When it comes to deep learning models, AI systems are hard for companies to understand. Building models that are easy to understand is necessary to use AI in private areas like banking, healthcare, and the law.
- Low availability of skilled employees: It is hard for businesses to do AI-based jobs because not enough people know how to use AI, machine learning, and data science (Tseng *et al.* 2021). Without a lot of money or staff, it's hard and expensive for small and medium-sized businesses (SMEs) to hire and keep skilled AI workers.
- Effective regulatory and legal compliances: There are questions about duty and possible risk when using AI, as well as about following the law and rules. To keep data safe and things safe, companies must follow strict rules when they use AI. The California Consumer Protection Act (CCPA) is what people in the US call it, while the General Data Protection Regulation (GDPR) exists in Europe. Organizations that use AI have to follow a lot of rules.
- **Return on Investment (ROI):** AI solutions can be pricey for companies that do not want to spend a lot of money on tools, technology, and people. This is especially true for small and medium-sized companies. AI projects are hard to figure out their return on investment (ROI) because they cost a lot to set up and don't always pay off right away (Abdalla *et al.* 2021).
- Integration of existing systems: It might be hard to add AI solutions to old IT systems and frameworks because of issues with sharing data, how systems work together, and making sure they are compatible (Zhai *et al.* 2021).

6.7 Conclusion

Some things are easier, faster, and smarter with AI, but it also has some issues. Businesses can create new chances, improve long-term growth, and make life better for everyone in the digital age by addressing these issues usmartly using AI AI is changing the way people get business help, making services better, and coming up with new ideas. To stay ahead of the competition, give their clients more value, and get better results, management consulting firms need to use AI-powered data analytics, strategic planning tools, process optimization solutions, client engagement platforms, risk management systems, and talent management technologies. Even though AI technologies are getting better and more popular, companies need to change with the times and use AI-driven solutions to stay ahead in the fast-paced world of business.

Chapter Seven: Conclusion and Recommendations

7.1 Conclusion

This dissertation has explored the integration of AI within management consulting firms, focusing on enhancing sustainable business practices. The study has highlighted that while AI can significantly improve decision-making, efficiency, and sustainability, it also presents challenges such as ethical considerations, the need for substantial investment in skills development, and the management of stakeholder expectations.

7.2 Recommendations

- Skill Development: Firms should invest in continuous learning and development programs to equip their workforce with the necessary AI skills.
- Stakeholder Engagement: Developing a comprehensive stakeholder engagement strategy can help manage expectations and foster a culture of trust around AI technologies.
- Ethical AI Use: Establishing clear guidelines and ethical standards for AI use will ensure that AI technologies are used responsibly and transparently.

7.3 Limitations of Research

This research has several limitations:

- Scope of Data: The data was collected from a limited number of consulting firms, which may not provide a full industry-wide perspective.
- Bias in Qualitative Data: As the study primarily relies on qualitative data, the conclusions drawn are subjective and influenced by the perceptions of the respondents.
- Rapidly Evolving AI Landscape: The fast-paced development in AI technology might outdate some findings quickly.

7.4 Contributions of the Research

This study contributes to the existing body of knowledge by:

- Practical Insights: Offering detailed insights into how AI is applied within the context of management consulting for sustainability.
- Framework for AI Integration: Suggesting frameworks to assist consulting firms in overcoming the challenges associated with AI integration.
- Basis for Policy Development: Providing empirical evidence that can aid policymakers in crafting regulations that foster ethical AI implementation in consulting.

7.5 Future Research Disserattion

Future research could explore:

• Broader Industry Analysis: Expanding the research to include a variety of consulting firms across different regions to obtain a more global understanding of AI's impact.

- Longitudinal Studies: Conducting longitudinal studies to track the evolution of AI integration and its long-term impacts on sustainability.
- Quantitative Analysis: Incorporating quantitative methods to validate and broaden the findings from this study.

By addressing these recommendations, limitations, contributions, and future research directions, this chapter aims to provide a comprehensive closure to the study while pointing out pathways for further exploration in the realm of AI and sustainable business practices.

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Appendices:

Appendix 1: Interview Transcripts

Transcript 1:

Participant ID: A1 Interviewer: Chirag Basavaraju Date: April 4, 2024 Participant: A1 Participant Designation: Associate

0.00 0 - 0.03 0

0.00.0 v 0.00.0 Chirag Basavaraju: Hello, um, thank you for agreeing to speak with me today. My name is Chirag Basavaraju, and, um, I'm a student at National College Ireland, pursuing a master's in International Business. This interview is part of my dissertation on the integration of AI in sustainable business practices within management consulting. How are you today?

0:03.0 - 0:10.0 Participant (A1): Hi Chirag, I'm doing well, thank you. I'm looking forward to helping with your research. Can you tell me more about what you aim to discover?

0:10.0 - 0:22.0

0.00.0 + 0.2.0 Ching Basswaraju: Absolutely, I'm exploring how, um, artificial intelligence can help management consulting firms enhance their sustainability practices and what challenges they might face along the way. Could you start by introducing yourself and explaining a bit about your role?

0:22.0 - 0:35.0 Participant (A): Sure, I work as an Associate here, and I've been involved in projects that utilize AI to optimize resource management and reduce environmental impact. We analyze a lot of data to predict and improve sustainability outcomes for our clients.

0:35.0 - 0:45.0 Chirag Basavaraju: That sounds fascinating. How do you think AI tools have impacted your ability to work on these sustainability projects?

v:+>:0 - v:>>.v Participant (A1): AI has definitely made a huge difference. It allows us to handle complex data sets and, um, derive insights much quicker than before, which not only speeds up our projects but also enhances the accuracy of our predictions and recommendations.

0:55.0 - 1:05.0

Chirag Basavaraju: That's very insightful. What challenges have you encountered while using AI in these projects?

1:05.0 - 1:18.0 Participant (Al): I'd say the biggest challenge is ensuring the data quality and dealing with the ethical aspects of AI, like bias in data algorithms, which can significantly affect our outcomes if not properly managed.

1:18.0 - 1:28.0 Chirag Basawaraju: Understanding those challenges is crucial. Thank you for sharing your experiences. I will be sending you a form with a few more questions later; it would be great if you could fill it out to add more depth to my research.

1:28.0 - 1:35.0 Participant (A1): No problem at all, I'll look out for it. Good luck with your dissertation, Chirag!

1:35.0 - 1:40.0 Chirag Basavaraju: Thank you for your time and insights!

Transcript 5:

Participant ID: SC2 Interviewer: Chirag Basavaraju Date: April 7, 2024 Participant: SC2 Participant Designation: Senior Consultant

0:00.0 - 0:03.0

Chirag Basavaraju: Hello! I'm Chirag, and I'm working on my dissertation at National College Ireland, focusing on how AI can be harnessed to advance sustainability practices within management consulting. How are you finding the workday so far?

0:03.0 - 0:10.0

Participant (SC2): Hello Chirag, the day's going well, thanks. I'm heavily involved in integrating AI into our environmental strategies here. It's intriguing to see how much you are delving into this area. What are you hoping to uncover through your research

0:10.0 - 0:22.0

Chirag Basavaraju: I aim to identify effective ways AI can enhance sustainable practices and also understand the barriers companies face. From your experience, what has been the most impactful use of AI in your projects?

0:22.0 - 0:35.0

Participant (SC2): AI has been transformative in optimizing our client's energy usage and reducing waste through predictive analytics. It's incredible how much can be achieved with the right tools.

0:35.0 - 0:45.0

Chirag Basavaraju: Absolutely, those are key benefits. Any notable challenges in implementing these AI solutions?

0:45.0 - 0:55.0

Participant (SC2): Integration with existing infrastructures is often a hurdle, along with ensuring the AI systems we deploy are adaptable to various regulatory environments.

0:55.0 - 1:05.0

Chirag Basavaraju: That makes a lot of sense. I'll include some follow-up questions in a form that I'll be sending your way. Would you mind completing it to help enrich my findings?

1:05.0 - 1:10.0

Participant (SC2): Not at all, I'd be happy to assist further.

1:10.0 - 1:15.0

Chirag Basavaraju: Thanks, your input is invaluable!

Participant ID: EM1 Interviewer: Chirag Basavaraju Date: April 7, 2024 Participant: EM1 Participant Designation: Engagement Manager 0:00.0 - 0:03.0 Chirag Basavaraju: Good morning! I'm Chirag Basavaraju, studying International Business at National College Ireland. My dissertation focuses on AI's role in promoting sustainability within management consulting. How are you this morning? 0:03.0 - 0:10.0 Participant (BM1): Good morning, Chirag! I'm well, thanks. Your dissertation topic sounds quite timely. I manage our firm's sustainability projects, and we're increasingly integrating AI. What inspired you to choose this topic? 0:10.0 - 0:22.0 v.uv.or v.e.v.or Chineg Bassavaragis: Thank you for asking. I was inspired by the potential AI has to significantly impact sustainability efforts positively, and I wanted to understand both the opportunities and challenges from a practical perspective. How does AI feature in your sustainability projects? 0:22.0 - 0:35. Participant (PM): We use AI mainly for data analytics and forecasting. It's crucial for making informed decisions about sustainability strategies. Can you share some preliminary findings from your research? 0:35.0 - 0:45.0 Chirag Basavaraju: Certainly. One key finding is that while AI can enhance project outcomes significantly, the main challenges include technical integration and overcoming initial resistance to new technologies. How do you approach these challenges? 0:45.0 - 0:55.0 Participant (B41): We focus a lot on training and change management, which helps in easing the integration process. Chirag, from your research, what do you think is the most critical factor for successfully implementing AI in sustainability initiatives? 0:55.0 - 1:05.0 Chirag Basavarju: From what I've gathered, continuous learning and adaptation appear to be crucial. Organizations must remain agile and open to evolving their AI capabilities. How do you see AI evolving in your work in the next few years? 1:05.0 - 1:15.0 Participant (BM1): I believe AI will become more predictive and personalized, allowing us to tailor sustainability solutions more precisely to each client's needs. I'm curious, how do you plan to structure your dissertation's recommendations? 1:15.0 - 1:25.0 Ching Basavaraju: I aim to offer actionable recommendations that balance innovation with practicality, focusing on strategic integration and ethical considerations. Thank you for your insights, they're incredibly helpful. Till be sending a follow-up form scon; T'd appreciate your further input. 1:25.0 - 1:30.0 Participant (EM1): I look forward to it. Best of luck with your dissertation, Chirag!

Appendix 2: Interview Questions

Regarding the Impact of AI in Developing Sustainable Business Practices:

a. Can you provide examples of how AI technologies have influenced sustainable development initiatives in the businesses you've consulted for?

Respondent	Response
EM1	AI helps optimize energy use and resource allocation
A4	Predictive analytics enhance sustainability goals.
A5	AI enables precise monitoring and analysis of data.
EM4	Real-time insights drive strategic decisions for sustainability.
EM1	AI models assess environmental impacts and mitigation.
SC3	AI supports eco-friendly product development and sales.
A4	AI trends guide sustainable market opportunities.
SC3	AI facilitates sustainable practices through innovation.
EM2	AI tech advances lead to sustainable solutions.
EM2	AI-driven data helps shape environmental policies.
A4	AI-driven CSR reports improve transparency.
A4	AI optimizes logistics, reducing emissions.
SC3	AI tools help analyze and improve sustainability.
EM1	AI bridges innovation with sustainable practices.
SC4	AI tools streamline and enhance project efficiency.

b. How do you assess the effectiveness of AI in addressing environmental challenges such as climate change, resource scarcity, and environmental degradation?

Respondent	Response
A4	AI enables data-driven sustainability strategies.
SC3	AI provides insights for impactful environmental decision-making.
EM1	AI models optimize resource use and predict changes.
EM4	AI streamlines processes and measures sustainability metrics.
A3	AI supports monitoring and forecasting environmental changes.
A4	AI drives sustainable innovation and business growth.
SC4	AI enhances predictive analytics for environmental trends.
EM1	AI accelerates scientific discoveries in environmental studies.
EM2	AI creates cutting-edge solutions for environmental challenges.
A4	AI aids evidence-based policy formation for sustainability.
SC3	AI informs CSR strategies and reporting.
SC2	AI optimizes supply chain efficiency and sustainability.
A4	AI provides comprehensive analysis for sustainability planning.
A5	AI revolutionizes approaches to environmental solutions.
EM4	AI improves planning and execution of sustainability projects.

c. In your experience, what role does AI play in enhancing decision-making processes related to sustainability within organizations?

Respondent	Response
EM1	AI optimizes sustainability strategies, improving efficiency and innovation.
SC3	AI offers predictive insights, aiding sustainable decision-making processes.
A4	AI identifies patterns and trends to inform sustainability measures.
A3	AI streamlines reporting, enabling data-driven sustainability strategies.
SC5	AI provides data analytics for targeted environmental solutions.
SC2	AI supports sustainability-focused product and service development.
EM1	AI assesses market trends, promoting sustainable business models.
SC4	AI advances research in sustainable practices and technologies.
SC5	AI develops innovative solutions for sustainability challenges.
A4	AI offers data-driven insights for creating sustainable policies.
EM2	AI measures impact, guiding CSR initiatives effectively.
EM4	AI optimizes logistics, reducing environmental impact and costs.
SC5	AI evaluates risks, promoting sustainable operational changes.
SC3	AI accelerates progress, fostering sustainable innovation.
A4	AI improves resource allocation, boosting sustainable outcomes.

d. Can you share any insights into how AI has been utilized to improve energy efficiency, conservation efforts, or sustainable agriculture in business operations?

Respondent	Response
EM1	AI optimizes energy usage, reduces carbon emissions effectively.
EM4	AI maximizes efficiency in resource management, saves costs.
SC4	AI models optimize energy consumption and sustainability data.
SC5	AI provides real-time insights to improve resource efficiency.
SC3	AI predicts patterns to enhance conservation and sustainability.
A5	AI boosts sustainable practices, leading to innovation growth.

EM1	AI trends enhance eco-friendly practices and energy savings.
A4	AI technology supports efficient, eco-friendly solutions in agriculture.
EM1	AI creates smarter, sustainable systems across industries.
A4	AI guides policies for greener energy and sustainable growth.
A5	AI aligns strategies with sustainability and conservation goals.
EM1	AI enhances logistics, reduces waste, and improves efficiency.
SC3	AI offers innovative approaches to boost environmental impact.
SC5	AI revolutionizes sustainable practices and industry standards.
EM1	AI improves project efficiency while adhering to sustainability.

Regarding Current Trends, Challenges, and Opportunities Related to AI Integration for Sustainability Initiatives:

a. From your perspective, what are the current trends in AI adoption for sustainability initiatives in the industries you consult for?

Respondent	Response
A4	AI supports eco-friendly business strategies and reporting.
SC5	AI optimizes resources and tracks environmental impact.
SC3	AI models predict trends and analyze sustainability data.
A4	AI streamlines tracking and improves compliance efforts.
A5	AI assists in monitoring ecosystems and emissions.
EM1	AI enhances green product development and strategy.
EM4	AI adoption drives innovation and sustainable practices.
EM2	AI research focuses on green technologies and data.
SC3	AI develops solutions for environmental and resource management.
SC5	AI informs policies on emissions, resource management.
A5	AI enhances ethical practices and transparency.
SC4	AI optimizes logistics and reduces waste in supply chains.
EM1	AI improves monitoring, data analysis, and decision-making.
SC5	AI combines innovation with green, sustainable strategies.
A4	AI tools aid in sustainable project planning and execution.

b. What are some of the main challenges organizations face when integrating AI technologies for sustainable practices, and how do you recommend addressing them?

Respondent	Response	
EM1	Lack of AI expertise; collaborate with specialists.	
EM2	Data quality and availability; improve data collection.	
EM3	Algorithm biases; continuous model evaluation and training.	
A4	Measuring impact accurately; use standardized metrics.	
A5	Technology integration issues; develop seamless AI solutions.	
A5	Cost of AI adoption; seek efficient AI tools.	
EM2	Limited ROI clarity; analyze long-term benefits.	
SC3	Ethical concerns; establish ethical AI guidelines.	
EM2	High complexity; simplify AI models and user interfaces.	

A4	Regulatory barriers; create supportive AI policies.
EM1	Aligning AI with values; develop transparent AI policies.
	Operational changes; create a flexible AI strategy.
SC4	Operational changes; create a flexible AI strategy.
A5	Implementation risks; test and adjust AI approaches.
A4	AI understanding; conduct training and education.

c. Have you observed any innovative AI-driven solutions that have been particularly effective in advancing sustainability goals within organizations?

Respondent	Response
EM2	AI optimizes resource use and reduces waste.
A5	AI predicts and manages carbon footprints.
A4	AI analytics improve energy efficiency.
EM4	AI-enabled tracking for compliance and reporting.
SC3	AI-driven models optimize environmental impact.
EM1	AI streamlines sustainable product development.
SC3	AI identifies trends for sustainable practices.
A4	AI enables advanced research on environmental impact.
SC4	AI automates sustainable processes.
EM1	AI informs and supports policy decisions.
SC5	AI-driven insights guide CSR strategies.
EM2	AI predicts and reduces supply chain emissions.
A4	AI-driven analytics help monitor sustainability goals.
A5	AI fosters cross-disciplinary sustainability initiatives.
EM1	AI improves project efficiency and sustainability.

d. In your opinion, what opportunities does AI present for businesses looking to enhance their sustainability efforts, and how can they best capitalize on them?

Respondent	Response
SC3	AI can optimize energy usage and reduce waste.
A4	Predictive analytics for sustainable practices and innovation.
A5	Data-driven insights for resource management and efficiency.
SC4	AI streamlines processes and improves green operations.
SC5	AI accelerates monitoring and environmental impact assessment.
EM1	AI-driven products with sustainability appeal attract customers.
EM1	AI enhances tracking and reporting of sustainability metrics.
EM4	AI helps understand and model ecological systems.
A4	AI drives development of sustainable technologies and methods.
SC3	AI offers solutions for regulatory compliance and governance.
SC5	AI enables targeted CSR initiatives and progress tracking.
SC4	AI optimizes logistics, reducing carbon footprint and costs.
EM1	AI streamlines strategies for achieving sustainability goals.
C4	AI catalyzes systemic change toward sustainability.

EM2 AI supports resource-efficient project planning and execution.

Regarding the Impact of AI in Shaping Future Management Operations, especially in Sustainability Consulting:

a. How do you envision AI shaping the future of management consulting, especially in the context of sustainability?

Respondent	Response
EM1	AI improves resource management and emissions control.
A4	Predictive analytics optimize energy consumption and waste reduction.
EM1	Machine learning enhances renewable energy systems and grids.
SC3	AI streamlines supply chain sustainability and carbon tracking.
EM2	AI aids in monitoring environmental impact and conservation.
SC5	AI identifies sustainable market opportunities and trends.
A5	AI provides data insights for green innovations and planning
A4	AI supports environmental modeling and climate research.
SC3	AI creates smart grids and efficient energy storage.
SC5	AI aids in policy development for sustainable practices.
EM2	AI-driven tools assess and improve social impact.
EM4	AI increases efficiency and reduces waste in logistics.
EM1	AI supports green operations and decision-making processes.
A4	AI offers transformative approaches to sustainability challenges.
SC1	AI-driven tools optimize project planning for sustainability.

b. Can you discuss any specific ways in which AI is currently being used to facilitate sustainable decision-making processes within organizations you consult for?

Respondent	Response
A4	AI optimizes resource allocation and tracks environmental impact.
EM1	Provides predictive analytics for sustainable practices.
A4	AI models assess environmental risks and impacts.
A4	AI helps in tracking and reducing carbon emissions.
SC3	AI aids in monitoring ecosystems and biodiversity.
A5	AI drives sustainable product development and lifecycle management.
SC3	AI evaluates trends and forecasts in sustainable industries.
SC4	AI studies sustainable systems and their impacts.
EM1	AI develops green technologies and renewable energy solutions.
SC2	AI supports policy formation for environmental regulation.
A3	AI ensures transparency and ethical practices.
A4	AI optimizes logistics and reduces waste.
SC4	AI provides actionable insights for eco-friendly operations.
SC4	AI leads innovative approaches to sustainable practices.
EM1	AI improves efficiency in sustainable project planning.

Respondent	Response
A4	AI optimizes resource use and promotes sustainable investments.
SC3	AI provides data-driven insights for sustainable decision-making.
A4	AI analyzes data to predict and optimize sustainability goals.
SC5	AI helps track progress and ensures sustainability alignment.
SC3	AI identifies and mitigates environmental impact effectively.
EM4	AI drives innovation towards sustainable business opportunities.
SC5	AI supports sustainable investment trends and market forecasting.
SC3	AI enhances sustainable strategies with advanced modeling.
A5	AI accelerates sustainable technology development and solutions.
EM4	AI supports evidence-based policymaking for sustainable practices.
SC4	AI aligns corporate goals with sustainable initiatives.
EM2	AI optimizes supply chain for sustainability and efficiency.
A5	AI helps identify and implement sustainable strategies.
A4	AI integrates sustainability across industries with intelligent systems.
EM1	AI streamlines project goals with sustainability considerations.

c. From your experience, how does AI enable organizations to align investments with sustainability goals, and what benefits does this alignment offer?

d. What role do you see AI playing in driving cultural shifts within organizations towards more sustainable business practices?

Respondent	Response
A4	AI drives eco-friendly initiatives and innovation.
A5	AI enhances data-driven sustainability strategies.
EM2	AI optimizes resource management and analytics.
SC3	AI streamlines reporting and monitoring practices.
EM1	AI enables accurate environmental assessments.
EM4	AI identifies sustainable growth opportunities.
A4	AI predicts trends in sustainable practices.
SC3	AI aids research in sustainable technologies.
SC3	AI accelerates eco-friendly technology development.
SC5	AI supports evidence-based policy formulation.
A5	AI influences ethical, sustainable operations.
EM1	AI boosts efficiency in sustainable logistics.
SC3	AI supports comprehensive sustainability planning.
SC4	AI inspires transformative change in businesses.
EM1	AI integrates sustainable solutions in projects

Regarding the PESTLE Analysis Focusing on Shaping AI in Business and Management Consulting:

Respondent	Response
SC3	Regulations drive sustainable AI practices and adoption.
A4	Political priorities affect sustainable AI development strategies.
EM1	Regulatory changes impact AI model development processes.
EM2	Government policies guide sustainable AI implementation.
A4	Regulations influence the integration of AI in research.
EM2	Political trends shape AI market opportunities.
SC4	Policies guide AI investment and deployment decisions.
EM2	Political climate affects funding for AI research.
SC5	Regulations affect AI innovation and market entry.
A4	Policies dictate ethical AI development and deployment.
EM1	Political views guide ethical AI deployment in industry.
SC5	Regulations impact AI use in logistics and sourcing.
SC3	Political climate influences sustainable AI adoption rates.
A4	Political priorities shape ethical AI standards and policies.
EM1	Regulations affect AI project timelines and budgets.

a. How do political factors influence the adoption and regulation of AI technologies within the industries you consult for?

b. What economic considerations drive decisions regarding AI implementation for sustainability initiatives in organizations you work with?

Respondent	Response
SC3	"Cost-effectiveness and long-term return on investment."
A5	"Balancing cost savings with environmental impact improvements."
A5	"Maximizing resource efficiency and minimizing waste."
EM1	"Reducing operational costs and improving compliance."
A4	"Assessing environmental risks and opportunities for efficiency."
EM1	"Enhancing market competitiveness and customer satisfaction."
SC5	"Identifying trends and maximizing investment in sustainable tech."
SC4	"Exploring AI's potential for future sustainability gains."
EM1	"Developing scalable, affordable sustainable solutions using AI."
EM4	"Aligning AI implementation with sustainability regulations."
SC3	"Improving brand reputation and aligning with corporate values."
SC5	"Streamlining processes to optimize resource usage and costs."
A5	"Providing strategic guidance for effective AI and sustainability."
EM2	"Driving innovation and influencing best practices in AI."
SC4	"Ensuring AI aligns with budget constraints and timelines."

Respondent	Response
EM1	Societal norms guide sustainable AI implementation.
EM2	Diverse attitudes shape tailored AI sustainability strategies.
EM1	Consider cultural context in AI for meaningful impact.
SC4	Social factors influence AI integration and operational priorities.
EM4	Demographics guide environmentally friendly AI utilization.
EM2	Market demand drives AI adoption for sustainability.
A4	Trends show shifting attitudes impacting AI's sustainability role.
SC3	Cultural perspectives influence AI's adoption for sustainability.
EM1	Demographics affect acceptance of AI-driven sustainability initiatives.
A4	Policies adapt to changing demographics and social trends.
A5	Public opinion shapes AI's social responsibility use.
SC5	Social trends guide sustainable AI supply chain strategies.
SC3	Attitudes impact AI strategy for sustainable outcomes.
EM2	Cultural attitudes shape AI's role in sustainable development.
EM1	Stakeholder diversity influences AI's sustainability acceptance.

c. How do social attitudes and demographics impact the acceptance and utilization of AI technologies for sustainability purposes within the organizations you consult for?

d. Can you provide insights into any legal challenges or regulatory considerations associated with AI implementation for sustainability initiatives in the industries you work with?

Respondent	Response
SC5	"Compliance with evolving regulations is a key challenge."
SC3	"Balancing innovation with regulatory frameworks."
EM4	"Data privacy concerns may arise during AI implementation."
EM1	"Legal landscape for AI is complex and rapidly changing."
EM2	"Environmental compliance and AI ethics are crucial."
A5	"Aligning AI initiatives with legal requirements is essential."
SC5	"Monitoring regulatory trends ensures proactive measures."
SC3	"Researching ethical AI use in sustainability is vital."
EM1	"Legal hurdles require agile solutions for AI projects."
EM4	"Regulations must evolve with AI sustainability needs."
SC4	"AI ethics must align with corporate social responsibility."
EM2	"AI in the supply chain faces legal scrutiny."
A5	"Navigating legal complexities is part of AI strategy."
A4	"Ethics and regulations are key discussion points."
SC3	"Staying compliant while innovating is challenging."

Respondent	Response
SC3	Prioritize AI for resource optimization and emissions reduction.
A4	Focus on AI's potential for environmental efficiency.
EM2	Use data-driven insights for sustainable practices.
A5	Integrate AI for efficient waste management strategies.
EM4	Leverage AI to improve ecosystem monitoring and protection.
EM1	Evaluate AI's impact on green product development.
A5	Assess AI's role in shaping sustainable industry trends.
SC3	Study AI's effectiveness in promoting sustainability goals.
A4	Innovate with AI for new sustainable solutions.
A4	Create regulations to encourage AI's sustainable applications.
SC5	Ensure AI aligns with CSR and sustainability objectives.
EM1	Utilize AI for efficient, sustainable supply chain management.
E2	Guide AI adoption for improved resource conservation.
SC5	Advocate for AI's role in achieving sustainable development.
SC1	Plan AI projects with sustainability in mind.

e. In your experience, how do environmental factors influence decisions regarding AI adoption and implementation for sustainability purposes within organizations?