The extent to which Algerian companies understand the practices of artificial intelligence in business

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Abstract:

This paper aims to study the extent to which Algerian companies understand the practices of artificial intelligence, as it represents the global trend and the direction of Algerian politics. The impact of artificial intelligence on achieving very good results at the level of global companies calls for the need to adopt its practices and reach a deep understanding of its mechanisms. It is clear that among the pillars of success in the business world is adding value in business management, marketing support, achieving sustainability requirements and harmony with them in companies, especially when the focus is on artificial intelligence practices. Through this, in our study, we searched for the acceptability or possibility of an acceptable understanding of artificial intelligence practices in business support, marketing, and harmony with sustainability. We test our hypotheses based on a questionnaire answered by companies based in Algeria. We found that there is an acceptable understanding of AI practices rightly and effectively could improve business management, support marketing and align with sustainablity.

Keywords: artificial intelligence, business administration, marketing, sustainability.

Introduction :

The great explosion in technology and the multiple and different entrances in the fields of management and the economic, social and political changes in various industrial fields, which contributed to the complexity of the challenges faced by leaders and managers alike ever to quickly transform and adapt to the many changes in the world. To survive in the highly competitive market, they need to be more agile, mobilizing and motivating their teams around common goals that will add value to their customers and lead to achieving the best results in all areas. All this changing business landscape necessitates the adoption and adaptation of Artificial Intelligence (AI). It is imperative that companies be creative, agile, and innovative, and consider AI practices and trends affecting management across multiple domains and industries. Which can lead to improving and developing organizational competencies and achieving results and goals with extreme accuracy.

While artificial intelligence has gained great attention in recent years due to recent developments in computers, computer network speeds, and the huge amount of data available, it was and still is a cause for very optimistic ideas, and it has suffered severe setbacks throughout history, and today it has become an essential part of the technology industry, carrying Burden of the most difficult problems in modern computer science. While artificial intelligence (AI) is nothing new, it has gained a lot of attention in recent years (Zhou, Chen et al. 2019).

Artificial intelligence is a driving force for companies around the world and in a wide range of sectors. Companies that implement AI applications can be expected to achieve gains in terms of added business value, such as increased revenues, reduced costs, and improved business efficiency (Alsheibani, Cheung et al. 2020). Organizations also see artificial intelligence as a strategic opportunity and a means to enhance marketing and to achieve a competitive advantage, and to take advantage of this, many companies must invest in artificial intelligence technologies. However, despite the growing interest in AI, many companies are struggling to realize value from AI (Ajjolli Nagaraja, Fontaine et al. 2019). The expected benefits of artificial intelligence are also very strong, as companies must invest time, effort and resources in the process of adopting everything related to artificial intelligence.

Artificial intelligence works to support and diversify the processes of dealing with business, the economy and society, by using the best existing expertise and improving it if necessary. It can even be developed and expect logical, scientific and practical solutions for continuous and permanent progress. There are many success stories proving the value of artificial intelligence. Companies that add machine learning and cognitive interaction to traditional business processes and applications can dramatically improve user experience and boost productivity.

However, there are some obstacles. Few companies have deployed AI at scale, for several reasons. For example, if you don't use cloud computing, machine learning projects can often be very expensive. They are also complex to construct, require expertise, are in high demand, and supplies are in short supply. Knowing when and where to merge these projects, as well as when to turn to third parties, will help reduce these difficulties

- **Study problem: What is the extent of understanding of artificial intelligence practices in Algerian economic companies?**

We divided this problem into sub-questions as follows:

How well is the understanding of AI practices in order to support marketing?

What is the extent to which AI practices are understood in order to improve business management?

What is the extent to which AI practices are understood in order to harmonize with sustainablity?

- **Main hypothesis: There is a acceptable understanding of AI practices in Algerian economic companies**

H1- There is a acceptable understanding of AI practices in order to improve business management

H2- There is a acceptable understanding of AI practices in order to support marketing

H3- There is a acceptable understanding of AI practices in order to align with sustainablity

- **The importance of the study:**

Based on the above,we consider that the subject of this study - artificial intelligence - is important in companies, as many recent articles have talked about it and programmed forums, conferences, seminars and even documentaries for it due to its necessity in our daily lives and its very great importance in companies, companies and organizations in all sectors, and therefore it is necessary to study its practices As a basic process in parallel with running a business as an important component of all companies in the world. Moreover, if companies need to adopt AI, they must have the best experts, managers, and leaders to support the new trends of AI in order not only to obtain profits but also to secure a position in the new world.

- **Objectives of the study:**

In this study, the researcher tries to achieve a set of goals:

Showing the reality of adopting artificial intelligence in our companies in Algeria.

- Clarifying the relationship between artificial intelligence, business administration, industry and marketing.
- Highlight the critical importance of understanding AI practices.
- Clarify the importance of artificial intelligence to meet customers' future expectations and how to support marketing.
- Improving corporate results to the best level by adopting artificial intelligence and align with sustainablity.
- Focusing on the impact of artificial intelligence on the entry of enterprises into the technologically advanced global market.

- **Methodology of the study:**

In order to understand the most important subject of the study, artificial intelligence, clarify its concept and promote its practices, we must take a set of methodological steps that can be adopted in this study, by answering the questions raised and to clarify the truth, existence or rejection regarding the validity of the hypotheses. We will take this part of the study. . First, in this study, we rely on the analytical descriptive approach by studying a sample of Algerian companies using the questionnaire tool. Secondly, we will study the amount of data obtained through the use of SPSS software. Third, the results we obtained allow us to generalize the results to Algerian companies.

- **Previous studies:**

(Nguyen, Sidorova et al. 2022) He explained that the emergence of artificial intelligence (AI) technologies led to the creation of promising research opportunities in the field of information systems (IS). By applying latent semantic analysis, we examine concordance between key themes in academic and practice discourse on artificial intelligence. The results of his study suggested that the academic research of business has focused mostly on the design and application of early AI technologies, while the interest of practitioners was more diversified. He examines these differences in the context of social and technical continuities and relates existing literature on artificial intelligence to basic information systems research areas. In doing so, he identifies current research gaps and suggests future research directions for information systems scholars regarding AI and organizations, AI and markets, AI and groups, AI and individuals, and the development of AI.

(Loureiro, Guerreiro et al. 2021) it examines the latest research on AI in a business context and proposes an agenda for future research. First, by analyzing 404 related articles collected through Web of Science and Scopus, he outlines the evolution of research on AI in business over time, highlights key works in the field, and leading places of publication. Then, using a text-mining approach based on Latent Dirichlet's assignment, the underlying themes were extracted from the literature and analyzed comprehensively. The results revealed 18 topics categorized into four main groups: the societal impact of AI, the organizational impact of AI, AI systems, and AI methodologies. This study then presents several major developmental trends and resulting challenges, including robotics and automated systems, the Internet of Things, AI integration, law, and ethics, among others. Finally, a research agenda is proposed to guide future AI research directions in business that addresses the identified trends and challenges.

(Glauner 2020) indicated that it is dealing with applications of artificial intelligence such as self-driving cars, spam filters, or voice recognition systems. And that from a business perspective, AI enables us to automate human decision-making. Thus we can reduce costs and lead times as well as increase revenue and profit margin. However, it can thus be said that there are many opportunities for artificial intelligence that companies can exploit. He provided tips and best practices on how to rethink your business in order to become an AI-driven business that thrives in an ever more competitive environment.

By presenting the previous studies it is clear to us that our study is characterized by the following:

- This study demonstrates the importance of artificial intelligence and its necessity for business.

- This study aims to clarify the importance of artificial intelligence and the various approaches that can benefit from it.

- This study shows the status of artificial intelligence practices in theory and researches the possibility of applying them in the field.

- This study focuses on supporting the ideas of adopting artificial intelligence and its ability to grant marketing advantages, improve sustainablity, and control costs.

Artificial Intelligence :

1-1-The concept of Artificial intelligence :

To understand the concept of artificial intelligence, it is first necessary to understand the concepts of "artificial" and "intelligence" separately. Intelligence can be described as involving mental activities, such as learning, reasoning, and understanding. On the other hand, the word "artificial" refers to something made by man, not natural. By combining these two together, artificial intelligence can be understood as making machines capable of simulating intelligence (Mikalef and Gupta 2021).

It can be said that it is the behavior and certain characteristics of computer programs that make them simulate human mental capabilities and work patterns. One of the most important of these characteristics is the ability to learn, reason and react to situations that were not programmed into the machine (Dreyfus 2012).

It is the study and design of intelligent clients, and the intelligent client is a system that understands its environment and takes positions that increase its chance of success in achieving its mission or the mission of its team.

In the early 2000s, AI was making bigger inroads. AI is used in logistics, data mining, medical diagnostics and many other areas throughout the technology industry (Delen, Walker et al. 2005). This success is due to several factors: the great power of computers today, the increased focus on solving specific sub-problems, the creation of new relationships between the field of artificial intelligence and other fields of work in similar problems, and above all, researchers began to adhere to strong mathematical approaches.

1-2-Types of artificial intelligence:

Artificial intelligence can be divided into (Sajja and Sajja 2021; Xivuri and Twinomurinzi 2021):

1-2-1-Narrow AI:

It is artificial intelligence that specializes in one field. For example, there are artificial intelligence systems that can beat the world champion in chess, which is the only thing they do.

1-2-2-General Artificial Intelligence:

This type refers to computers with the level of human intelligence in all fields, that is, it can perform any intellectual task that a person can do. Creating this type of intelligence is much more difficult than the previous type, and we have not reached this level yet.

1-2-3-Super Artificial Intelligence:

Oxford philosopher Nick Bostrom defines superintelligence as "intellect far smarter than the best human minds in almost every field, including scientific creativity, general wisdom, and social skills." Because of this type, the field of artificial intelligence is an interesting field to delve into.

1-3- The importance of artificial intelligence:

There is broad agreement among AI researchers that intelligence is required to (Sunarya 2022):

• Reason, use strategy, solve puzzles, and make judgments under uncertainty.

• Representation of knowledge, including logical knowledge.

• plan.

• to learn.

• Communicate in natural language.

• The integration of all these skills towards common goals.

1-4- What are the driving factors for the adoption of artificial intelligence?

There are many factors driving the development of AI across industries as (Chen, Li et al. 2021):

• Provides high-performance computing capabilities easily and affordably. The abundance of business computing power in the cloud enables easy access to affordable, high-performance computing power. Prior to this development, the only computing environments available for AI were not cloud-based and cost prohibitive.

• There are large amounts of data available for learning. AI needs to learn from a lot of data to make correct predictions. Ease of data naming and affordable storage and processing of structured and unstructured data allows for further training and creation of algorithms.

• Applied AI technology provides a competitive advantage. Companies are increasingly recognizing the competitive advantage of applying AI insights to business goals and making it a business priority. For example, targeted recommendations made by AI technology can help you make better decisions faster. Many of the features and capabilities of AI can lower costs, reduce risk, speed up time-to-market, and more.

Learn how to achieve more than you thought

2- Artificial Intelligence and Marketing:

Organizations that use AI for marketing purposes are suggested to experience several benefits. The typical way that AI can drive marketing performance is by segmenting customers based on their needs to target segments with different, customized marketing strategies. AI can enhance customer segmentation by processing and learning from existing customer data, enabling organizations to learn about their customers' preferences and lifestyle in an entirely new way. This capability enables more granular segmentation because organizations can classify customers at a finer level (Mishra and Pani 2021). Thus, organizations can better target their marketing and it opens up the possibility of offering individualized marketing through experience personalization (Mishra and Pani 2021). Thus,

AI enhances marketing effectiveness and accuracy by targeting the right customers with the right marketing strategy. Also, as customer behavior changes, segmentation suggestions are recreated from the AI system so that organizations can effectively adapt their marketing strategy.

2-1- How can artificial intelligence technology help organizations:

The main principle of AI is to mimic and transcend the way humans perceive and interact with the world around us. Which is quickly becoming the mainstay of innovation. Equipped with several forms of machine learning that recognize data patterns to enable predictions, AI can add value to your business by (Agrawal, Gans et al. 2019):

• Provide a more comprehensive understanding of the abundance of available data

• Rely on predictions in order to automate highly complex tasks as well as the usual tasks

Automating tasks through AI involves replacing human labor with a machine. By automating tasks, organizations may relieve some employees from routine, repetitive tasks, which enables them to focus on other knowledge-intensive activities that add more value to the organization (Makarius, Mukherjee et al. 2020), thus increasing its productivity. Moreover, machines can perform tasks faster and with greater accuracy than humans, which increases the productivity of organizations, particularly in manufacturing industries and supply chain operations (Balasundaram and Venkatagiri 2020). Moreover, the use of AI can reduce the time required to complete some key business processes, and improve error rate and delay times by automating a series of tasks. For example, the use of AI in automotive manufacturing to automate optical recognition of barcodes and license plates improves efficiency compared to that of a human employee (Demlehner and Laumer 2020).

Replacing human labor with machines also includes reducing or eliminating errors made by human employees, and increasing transparency. Thus, it is suggested to improve the quality of the results.

The medical and technical development that took place during the half-century allowed the development of applications of artificial intelligence in the medical field, and among these applications (Guo and Li 2018):

• The development of computer capacity, which led to faster collection and analysis of data.

• Increasing the volume of medical data and the ease of access to it from personal and medical devices.

• Increasing databases related to genomic sequences.

• Spreading the application of electronic health record systems.

• Improved natural language processors and computer vision, which led to the development of machine learning.

• Improved surgical accuracy.

2-2-Artificial Intelligence to achieve business opportunities in the field of industry:

The tendency of large companies to merge with other companies increases the abundance and accessibility of data, and the abundance of this data leads to the increase in applications of artificial intelligence. The consolidation of large health companies allows access to a greater amount of health data, and this is what lays the foundation for the work of AI algorithms (Lohr 2012).

A large part of the focus of the mechanisms used to employ AI in the every sector is on clinical decision support systems. Machine learning algorithms adapt and provide more realistic results and solutions as the number of data collected increases. Many companies are experimenting with the possibility of employing big data in the healthcare industry, and many companies are exploring possible business opportunities through data evaluation, storage, management and analysis technologies; All of these technologies are important in the healthcare industries.

2-3- Marketing to automate the economy:

The traditional consensus among economists has been that technological progress does not cause long-term unemployment. But recent innovations in robotics and artificial intelligence have raised fears that human labor will be eliminated, leaving people in various sectors without jobs to earn a living, and thus leading to an economic crisis. Many small and medium-sized businesses could also go out of business if they cannot license or afford the latest AI and robotic technologies, and focus may need to focus on areas or services that cannot be easily replaced, to survive in front of this technology (Dobrescu and Dobrescu 2018).

3. Sustainablity:

It ensures that resources are obtained and used effectively and efficiently in order to reach the company's economic, social and environmental goals. It is also considered the sound framework that links the environment in terms of social management with business management and competitive strategy.

3-1- Artificial intelligence and sustainablity:

Performance Sustainability The potential of AI can drive business model innovation towards sustainability. Sustainable business models describe how organizations can be created, delivered, and benefited from in a way that contributes to the sustainable development of the company and society (Toniolo, Masiero et al. 2020). In other words, companies must conduct their business while simultaneously focusing on environmental and social issues. Artificial intelligence has the ability to influence individuals and society in a long-term manner (Alsheibani, Cheung et al. 2020). Environmental AI can influence environmental sustainability, such as reducing energy costs, reducing energy consumption, and thus reducing negative environmental impacts (Toniolo, Masiero et al. 2020).

3-2- Artificial intelligence in the performance of companies:

AI technology improves the performance and productivity of organizations by automating processes or tasks that previously required manpower. AI can also understand data at a scale that no human can achieve. This ability can bring significant business benefits. For example, Netflix uses machine learning to provide a level of personalization that has helped the company grow its customer base by more than 25 percent (Acemoglu and Restrepo 2018).

Most companies have made data science a priority and are still investing heavily in it. A 2021 McKinsey survey on AI found that companies reporting adoption of AI in at least one job increased to 56 percent, up from 50 percent in the previous year. Additionally, 27 percent of respondents reported that at least 5 percent of profits can be attributed to artificial intelligence, up from 22 percent a year earlier.

Artificial intelligence delivers value to most jobs, businesses, and industries. It includes general applications and applications for specific fields, such as (Oosthuizen, Botha et al. 2021):

• Using transactional and demographic data to predict how much specific customers will spend on their relationship with the company or a customer's lifetime value.

• Optimizing prices based on customer behavior and preferences.

3-3- Companies use artificial intelligence to improve performance:

There are multiple stages in developing and deploying machine learning models, including training and inference. AI training and inference refer to the process of experimenting with machine learning models to solve a problem.

For example, a machine learning engineer might try different candidate models for a computer vision problem, such as detecting bone fractures on X-ray images.

To improve the accuracy of these models, the engineer feeds data into the models and adjusts the parameters until they meet a predetermined limit. These training needs, measured by model complexity, evolve exponentially each year.

The underlying infrastructure technologies for large-scale AI training include cluster networking, such as RDMA and InfiniBand, barebones GPU computing, and high-performance storage (Davenport and Ronanki 2018).

Companies use artificial intelligence primarily to (Mohanta, Jena et al. 2020):

• Detect and deter security intrusions
• Solving technical problems for users
• Reducing production management work
• Measure internal compliance when using approved suppliers

- **Empirical study:**

Population and sample of the study: The study population was targeted by companies in Algeria. Then the study was selected from a stratified random area of the study population.

Study tool: After looking at the theoretical aspect, a questionnaire appeared to answer the questions. 44 questionnaires were distributed, then we got 40 questionnaires, 37 questionnaires were accepted. Accordingly, we can say that these numbers represent the approximate percentage of 84.09 % of the total questionnaires.

Statistical Methods: After collecting and reviewing the data and making sure that the appropriate information is available to it. Study tables and different industries: mean and standard deviation.

Coefficient of correlation: To answer the question, correlation should be used to find out the relevance of the paragraphs, and to find the significance of the study variables.

Discuss the results of the understanding of artificial intelligence practices:

In the following part we show table 1 includes the results of mean, standard deviation and correlation.

Table 1: Results of Mean, Standard Deviation and Correlation

paragraph	Mean	Standard deviation	AI	AI support bussiness	AI support marketing	AI align with sustainablity
AI	3,5838	, 621	1	,669**	,538**	,733**
AI support bussiness	3,6865	, 448	,669**	1	,800**	,776**
AI support marketing	3,5135	,408	,538**	,800**	1	,706**
AI support sustainablity	3,4324	, 771	,733**	,776**	,706**	1
** P<0.05						

Source: Prepared by researcher based on the SPSS 22 outputs.

The mean of AI was 3.58 the mean of supporting bussiness was 3.51 and the mean of supporting marketing was 3, 44 and the mean of sustainablity was 3.43. The standard deviation was between 0.40 and 0.77. The AI align with sustainablity was ranked the first because of its importance.

As well as, we found the values of correlation all statistically significant at α (0.05). This confirms the acceptance reality of the practices of artificial intelligence. However, it can be said that there are some large-scale organizations that have the potential to adopt artificial intelligence

Discuss the results of AI practices in order to support business management:

In the following segment we illustrate results of the AI practices in order to support business management.

Table (2): The mean values of the study sample for the questionnaire paragraphs were set as follows:

Table 2 : Results

Paragraphs	**Mean**	**Standard deviation**
AI support bussiness		
B1	3,7838	,82108
B2	3,6216	,95310
B3	3,5676	1,01490
B4	3,6216	,98182
B5	3,8378	,98639

Source: Prepared by researcher based on the SPSS 22 outputs.

The first paragraph with a mean of 3.78, the second paragraph with a mean of 3.62, the third paragraph with a mean of 3.56, while the fourth paragraph was a mean of 3.62 while the fifth paragraph with a mean 3.83.

We note that the means are limited between 3.56 and 3.83 and with a standard deviation between 0.82 and 1.01. The third paragraph was ranked first because of its importance to give more understanding of AI entitled with " The company is increasingly recognizing the competitive advantage of applying AI insights to business goals".

Table (2) also shows that the means were higher and greater than the assumed average of (3). We calculate it as follows: (1+2+3+4+5)/5=3

Discuss the results of AI practices in order to support AI support marketing:

In the following segment we illustrate results of the AI practices in order to support marketing.

Table (2): The mean values of the study sample for the questionnaire paragraphs were set as follows:

Table 3 : Results of

Paragraphs	**Mean**	**Standard deviation**
AI support marketing		
M1	3,5135	,83738
M2	3,5946	1,03975
M3	3,4054	,95625
M4	3,7297	,80445
M5	3,3243	,91451

Source: Prepared by researcher based on the SPSS 22 outputs.

The first paragraph with a mean of 3.51, the second paragraph with a mean of 3.59, the third paragraph with a mean of 3.40, while the fourth paragraph was a mean of 3.72 while the fifth paragraph with a mean 3.32.

We note that the means are limited between 3.32 and 3.72 and with a standard deviation between 0.80 and 1.03. The second paragraph was ranked first because of its importance to give more understanding of AI in supporting marketing entitled with " As customer behavior changes, segmentation suggestions from the AI system are recast so organizations can effectively adapt their marketing strategy".

Discuss the results of AI practices in order to support AI align with sustainablity:

In the following segment we illustrate results of the AI practices in order to align with sustainablity.

Table (2): The mean values of the study sample for the questionnaire paragraphs were set as follows:

Table 4: Results of

Paragraphs	**Mean**	**Standard deviation**
AI support sustainablilty		
B1	3,3514	1,15989
B2	3,4865	1,01712
B3	3,4595	,86905
B4	3,7838	,75038
B5	4,2973	,74030

Source: Prepared by researcher based on the SPSS 22 outputs.

The first paragraph with a mean of 3.35, the second paragraph with a mean of 3.48, the third paragraph with a mean of 3.45, while the fourth paragraph was a mean of 3.78 while the fifth paragraph with a mean 4.29.

We note that the means are limited between 3.35 and 4.29 and with a standard deviation between 0.74 and 1.15. The first paragraph was ranked first because of its importance to give more understanding of AI aligning with sustainablity, the paragraph entitled with " The potential of AI can drive business model innovation towards sustainability".

Hypothesis discussion:

According to the table 1, we can conclude the all the hypotheses are confirmed but in different degrees as follows:

H1- There is a acceptable understanding of AI practices in order to improve business management
As we see in the table 1 that the value of correlation between AI and its practices in improving business management were statistically significant at α (0.05). So we can say that there is an acceptable understanding of AI practices rightly and effectively could improve business management So, we tend to confirm that it’s an acceptable to illustrating this idea.

H2- There is a acceptable understanding of AI practices in order to support marketing
As we see in the table 1 that the value of correlation between AI and its practices in supporting marketing were statistically significant at α (0.05). So we can say that there is an acceptable understanding of AI practices rightly and effectively could support marketing. So, we emphasize that it’s good to illustrating this idea.

H3- There is a acceptable understanding of AI practices in order to align with sustainablity
As we see in the table 1 that the value of correlation between AI and its practices in supporting marketing were statistically significant at α (0.05). So we can say that there is an

acceptable understanding of AI practices rightly and effectively could aligning with sustainablity. So, So, we strengthen our study by this best results to illustrating this idea.

We conclude throughout the table 1 that all hypotheses have been achieved and they are valid. Accordingly, we could say that there is an acceptable understanding of AI practices rightly and effectively could improve business management, support marketing and align with sustainablity.

Conclusion:

Artificial intelligence is becoming increasingly important for organizations to create business value and achieve competitive advantage. However, many AI initiatives fail despite the investment of time, effort, and resources. There is a lack of consistent understanding of how AI technologies can create business value and what kind of business value can be expected.

Artificial intelligence is a mental activity such as learning, reasoning, and understanding that is man-made and it can be realized that there is a machine that tells the mental capabilities of a person Artificial intelligence is the embodiment of human intelligence in many fields. Artificial intelligence understands the organization's environment and takes positions that increase its chance of success and the great power of computers and technology allows to increase the efficiency of artificial intelligence.

There is no opting out of switching to AI. To stay competitive, every company must eventually embrace AI and create an AI ecosystem. It is normal for companies that fail to adopt AI in some capacity over the next ten years to be left behind. Although your company may be an exception to this rule, most companies do not have the in-house skills and experience to develop the kind of ecosystem and solutions that can augment AI capabilities.

By knowing how to use AI, organizations can make better decisions to implement AI solutions and know the potential impacts of adopting AI. For a successful AI transformation journey that includes strategy development and access to tools, find a partner with domain expertise and a comprehensive AI portfolio. The factors enabling, accelerating, or discouraging the use of AI must be determined by its technological, organizational, and environmental resources and conditions. Which leads to sustainable and competitive performance and sustainable leadership.

Therefore, a research agenda must be presented that identifies the areas that must be addressed through future research to understand the value generation mechanisms of artificial intelligence technologies in a sustainable environment in order to achieve sustainable leadership.

Artificial intelligence aims to improve business efficiency there fore the business analysts take data more seriously to pinpoint problems wich help company increasingly in recognizing the competitive advantage of applying AI insights to business goals. Business analysts take data more seriously to set goals accurately. Accordingly, the historical collection of company information and its integration into artificial intelligence allows for

good prediction and avoidance of all errors. AI can enhance customer segmentation by processing and learning from existing customer data. As customer behavior changes, segmentation suggestions from the AI system are recast so organizations can effectively adapt their marketing strategy. Dividing customers into segments based on their needs enables organizations to better target their marketing and improve error rate and delay times by automating a series of marketing tasks. There fore, using artificial intelligence to reduce the time required to complete key business operations. The potential of AI can drive business model innovation towards sustainability. Henceforward, environmental AI can influence environmental sustainability to reduce energy costs and can influence environmental sustainability to reduce energy consumption and could influence environmental sustainability to reduce negative environmental impacts.

We conclude throughout this study that there is an acceptable understanding of AI practices rightly and effectively could improve business management, support marketing and align with sustainablity.

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Appendices

The questionnaire:

Prases	Strongly agree	agree	neutral	do not agree	Strongly Disagree
artificial intelligence					
Artificial intelligence is a mental activity such as learning, reasoning, and understanding that is man-made					
It can be realized that there is a machine that tells the mental capabilities of a person					
Artificial intelligence is the embodiment of human intelligence in many fields.					
Artificial intelligence understands the organization's environment and takes positions that increase its chance of success.					
The great power of computers and technology allows to increase the efficiency of artificial intelligence.					
Business					
Artificial intelligence aims to improve business efficiency					
Business analysts take data more seriously to pinpoint problems.					
The company is increasingly recognizing the competitive advantage of applying AI insights to business goals.					
Business analysts take data more seriously to set goals accurately.					
The historical collection of company information and its integration into artificial intelligence allows for good prediction and avoidance of all errors.					
marketing					
AI can enhance customer segmentation by processing and learning from existing customer data.					
As customer behavior changes, segmentation suggestions from the AI system are recast so organizations can effectively adapt their marketing strategy.					
Dividing customers into segments based on their needs enables organizations to better target their marketing.					
Improve error rate and delay times by automating a series of marketing tasks.					
Using artificial intelligence to reduce the time required to complete key business operations.					
Sustainability					
The potential of AI can drive business model innovation towards sustainability.					

Environmental AI can influence environmental sustainability to reduce energy costs.					
Environmental AI can influence environmental sustainability to reduce energy consumption.					
Environmental AI can influence environmental sustainability to reduce negative environmental impacts.					