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Determination of Economic Climate Change and Development of the Internet of Things: Analysis of Business Sustainability and Competitive Advantage

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Abstract: Purpose – The goal of this work is to construct a hypothesis on the influence of factors that may subsequently be used for further research within the area of marketing management. **Design/methodology/approach** – The research method chosen was descriptive qualitative. Data was acquired from past research that is relevant to this study and sourced from academic internet media such as Publish or Perish, Google Scholar, digital reference books, and the journal Sinta. **Findings** – The findings of this study show that: 1) Climate change affects business sustainability; 2) The development of the internet of things has an impact on business continuity; 3) Climate change affects competitive advantage; 4) The development of the internet of things influences competitive advantage; and 5) Business sustainability influences competitive advantage. **Research limitations/implications** – The constraints of the data used in this study mean that the results produced are less than perfect. **Practical implications** – This research is valuable for business executives who want to understand the influence of climate change and the expansion of the Internet of Things on their company's sustainability and competitive advantage.

Keyword: Business Sustainability, Competitive Advantage, Climate Change, IoT Fevelopment.

INTRODUCTION

Climate change has emerged as one of humanity's most pressing global issues, with far-reaching environmental, social, and economic implications. Meanwhile, IoT innovations have revolutionized real-time data collecting, monitoring, and analysis, opening up new potential for organizations to optimise processes, boost efficiency, and produce considerable added value. In this environment, recognizing the link between climate change and IoT development is critical for identifying opportunities and threats, as well as developing sustainable and competitive corporate strategies. Climate change, driven by human activities such as fossil

fuel combustion and deforestation, has resulted in rising global temperatures, changes in extreme weather patterns, rising sea levels, and a variety of other negative consequences. Climate change can cause material losses in the business world, such as damage to infrastructure and production facilities from natural catastrophes, as well as substantial operational concerns. This emphasizes the importance of climate change-responsive corporate strategies, such as investing in risk reduction, adapting to changing conditions, and developing environmentally friendly products and services.

On the other side, IoT has transformed several industrial sectors by enabling greater connectivity, continuous data collecting, and real-time analytics. The Internet of Things enables businesses to collect and analyze data from a range of sources, including sensors, mobile devices, and other systems, to get important insights into their business operations. This is a chance to improve operational efficiency, anticipate consumer demands, enhance user experience, and identify new areas for innovation and growth. However, while IoT innovations have immense potential for enterprises, there are problems and hazards that must be addressed. One of them is the issue of data security and privacy, in which the use of sensors and connected devices raises the possibility of cyberattack and data misuse. Furthermore, the cost of infrastructure and IoT technology deployment can be a barrier for enterprises, particularly in less developed or resource-intensive sectors.

There are various sites of intersection to examine while studying the relationship between climate change and IoT advances. First, IoT may be used to track and predict the effects of climate change, such as air pollution, sea surface temperature, and deforestation. Data produced by IoT sensors can help us better understand environmental conditions and take more effective adaptation strategies. Second, IoT may be utilized to assist combat climate change by improving energy efficiency in critical sectors such as transportation, industry, and buildings. Third, integrating IoT with other technologies, such as artificial intelligence (AI) and big data analysis, can improve the ability to foresee climate change trends and build data-driven solutions to the difficulties that exist.

However, there are several hurdles to combining climate change with IoT in business. One of them is the complexity of the data created by IoT sensors, which necessitates a robust infrastructure and analytical capacity to convert it into usable information. In addition, clear standards and laws are required to assure security, privacy, and interoperability in an increasingly complex IoT ecosystem. Understanding the relationship between climate change and IoT advances allows businesses to establish more sustainable and competitive business strategies. This involves investing in IoT technologies to improve operational efficiency and reduce environmental impact, as well as building resilience to climate change through adaptation and risk mitigation strategies. Furthermore, collaboration among the government, commercial sector, and civil society organizations is required to build an ecosystem that fosters innovation and transition toward a more sustainable future. Thus, integrating climate change and IoT may be critical to accomplishing sustainable development goals and corporate sustainability in the future.

Based on the background above, the problem formulation is determined as follows: 1) Do changes in the economic climate affect business sustainability?; 2) Does the application of the internet of things affect business continuity?; 3) Do changes in organizational climate affect competitive advantage?; 4) Does the application of the internet of things affect competitive advantage?; and 5) Does business sustainability affect competitive advantage?.

Literature Review

Business Sustainability

Business sustainability, also known as business continuity or sustainable business, is a strategy approach in which businesses strive to ensure that their activities can exist in the long

run without damaging the environment, society, or economic sustainability. This concept is founded on the recognition that firms must consider their environmental and societal impact in addition to producing financial rewards. Thus, business sustainability combines three major dimensions: economic, environmental, and social, to generate long-term value for the company, stakeholders, and society as a whole. Overall, business continuity is pushing a shift in how businesses function, one that is more interconnected and focused on long-term value. This entails a transformation in company culture and practices, with sustainability becoming an integral element of business strategy and decision making. Companies that adopt a sustainable approach can provide long-term value for all stakeholders, protect the environment, increase social welfare, and ensure long-term company continuity (Haitao, 2022).

The indicators or dimensions contained in sustainability include: 1) Regulatory compliance: A company's adherence to relevant regulations and standards is a key indicator of business continuation. Failure to follow government laws or industry standards may result in fines, legal ramifications, or major reputational damage; 2) Environmental performance indicators, such as lower greenhouse gas emissions, energy efficiency, and effective waste management, demonstrate a company's dedication to environmentally responsible business practices. These assessments are critical to ensuring that businesses consider their environmental impact in addition to financial profits; and 3) Innovation and adaptation: A company's ability to innovate and adapt to market and environmental changes is a key determinant of its sustainability. Companies that continuously develop new goods, enhance operational processes, and adjust their business strategy to changing conditions will be more likely to thrive in the long run (Tri Murti et al., 2021).

Business sustainability has been studied by several researchers, including: (Kamilia & Nawangsari, 2023), (Meza-Ruiz et al., 2017), (Cendana, 2019).

Competitive Advantage

Competitive advantage refers to the conditions or causes that allow a firm or product to hold a stronger and more profitable market position than its competitors. This notion is central to business strategy, which highlights the significance of developing distinctive added value for clients in order to differentiate the company from its competitors and gain a major competitive advantage. Product innovation, operational efficiency, exceptional customer service, a strong brand reputation, and access to rare or difficult-to-imitate resources can all provide a competitive advantage. Overall, competitive advantage is an important aspect in determining a company's or product's long-term market success. Companies can acquire a strong position and earn long-term profitability by providing distinctive additional value to clients, distinguishing themselves from competitors, and maximizing the use of available resources. As a result, building and maintaining a competitive advantage must be the primary emphasis of every company's business strategy if it hopes to survive and grow in a competitive business climate (Fitriani et al., 2022).

The indicators or dimensions contained in competitive advantage include: 1) Strong brand reputation: Having a positive and respected brand reputation can help you gain a competitive advantage. A great brand may boost client trust, set a company apart from its competitors, and defend against market volatility; 2) Operational efficiency: Effective supply chain management, cost control, and optimal resource use can all provide a competitive edge. Companies that can streamline their operational procedures are more efficient and cost competitive; and 3) Product or service quality: A company that provides high-quality products or services can gain a competitive advantage. Superior quality may boost customer happiness, establish a solid brand reputation, and set a company apart from its competition (Sopandi et al., 2022).

Competitive advantage has been studied by several researchers, including: (Chong & Ali, 2022), (Octavia et al., 2020), (Desfiandi et al., 2017).

Economics of Climate Change

Economic climate change refers to how climatic change affects economic activity, economic growth, income distribution, and societal well-being. This phenomena has a variety of implications, ranging from direct losses in specific sectors to broader macroeconomic effects on economic development and financial stability. Weather patterns, global temperatures, and drought levels all contribute to economic climate change, which has an impact on agricultural production, industrial productivity, infrastructure, and general human well-being. Frequent flooding, for example, can damage production facilities, inflict huge losses in agriculture and infrastructure, and disrupt global supply chains. On the other side, prolonged drought can lower agricultural production, raise energy costs, and harm the tourism and leisure industries (Ali et al., 2023).

The indicators or dimensions contained in climate change include: 1) Climate change may result in changes to government rules and policies, such as carbon taxes, emissions requirements, and renewable energy subsidies. These changes can have a significant impact on the business strategies, manufacturing costs, and earnings of organizations across a variety of industries; 2) Changes in consumption and investment patterns: Climate change has the potential to influence people's spending and investing habits. A rise in the cost of fossil fuels, for example, may motivate customers to switch to renewable energy and ecologically beneficial technology. Climate change may have an impact on customer choices for sustainable and environmentally friendly products and services; and 3) Climate change can impact agricultural output by altering rainfall patterns, temperature, and drought. Reduced agricultural productivity can lead to higher production costs, lower crop yields, and food supply instability, all of which can have a negative influence on food prices and market availability (Darsana & SE, 2023).

Climate change has been studied by several researchers, including: (Gössling et al., 2020), (Junsheng et al., 2020), (Maftuhin & Kusumawardani, 2022).

Development the Internet of Things

The Internet of Things (IoT) is a concept in which the items or equipment around us are outfitted with sensors, software, and internet connections, allowing them to automatically connect and exchange data. In other words, the Internet of Things (IoT) is a network of numerous physical devices that may connect with one another and other systems over the internet. This notion alters how we interact with our environment by allowing everyday items, ranging from household electrical devices to automobiles and metropolitan infrastructure, to become "smart" and adapt to our preferences and requirements. Thus, the emergence of the Internet of Things has paved the way for a fundamental digital transformation in many parts of our lives, enhancing connectivity, efficiency, and overall quality of life. As technology advances and IoT becomes more widely adopted, we should expect more innovation and beneficial improvements in how we work, play, and interact with our surroundings (Nofrialdi et al., 2023).

The indicators or dimensions contained in the development of the internet of things include: 1) Increased technology acceptance: The growth of IoT may also be assessed by the increase in technology adoption in many industrial sectors and in everyday life. For example, the growing popularity of smart automobiles, smart homes, and smart cities demonstrates how IoT is progressively being integrated into existing infrastructure and processes; 2) Availability of network infrastructure: A robust and dependable network infrastructure is required for IoT development. These indicators include internet speed, network coverage, and the availability

of wireless technologies such as 5G, which allow for rapid and seamless data interchange between IoT devices; and 3) Technological innovation: The evolution of IoT may be observed through ever-changing technological advances, such as smaller and less expensive sensors, more advanced cloud computing platforms, more complicated artificial intelligence algorithms, and more efficient communication protocols. This invention allows for the creation of more sophisticated and valuable IoT systems (Ben-Daya et al., 2019).

The development of the internet of things has been studied by several researchers, including: (Wijaya et al., 2022), (Chong & Ali, 2021), (Nasir, 2021).

METHOD

Review of Literature Essays are composed utilizing methodologies such as Library Research and Systematic Literature Review (SLR). The qualitative evaluation of these methods was conducted and their availability may be found on academic web sources such as Mendeley and Google Scholar. A systematic literature review (SLR) refers to the methodical procedure of locating, evaluating, and scrutinizing all available research material in order to tackle a certain study issue. When conducting qualitative analysis, it is crucial to consistently apply the literature review in accordance with methodological assumptions. The primary rationale for undertaking qualitative analysis is in the exploratory nature of research , (Duli, 2019).

RESULT AND DISCUSSION

Results

The research findings, considering the history and problem formulation, are as follows:

Previous Research Results

Table 1. Relevant Previous Research Results

No	Author (Year)	Research Results	Simmilarities With this Articles	Difference With this Articles	Basic Hypothesis
1.	(Darsana & SE, 2023)	Climate change and its impacts affect the tourism business and business sustainability	The influence of climate change on business sustainability	The impact of climate change on the tourism business	H1
2.	(Wijaya et al., 2022)	Use of Technology and the Potential of the Internet of Things for Business Sustainability and MSME Development	The influence of the internet of things on business continuity	The influence of the use of technology on the development of MSMEs	H2
3.	(Pandini & Hwihanus, 2023)	The implementation of carbon taxes and climate change affects business sustainability, ticket prices and passenger decisions	The influence of climate change on business sustainability	The effect of implementing a carbon tax on ticket prices and passenger decisions	H3
4.	(Aulia & Imam Wahjono, 2023)	The internet of things influences the competitive advantage of Tokopedia's e-commerce business	The influence of the Internet of things has an impact on competitive advantage	The research object is Tokopedia E-Commerce	H4
5.	(Fitriani et al., 2022)	Business continuity and market orientation influence competitive advantage during Covid-19	The influence of business sustainability on competitive advantage	The influence of market orientation on competitive advantage during Covid-19	H5

Discussion

Based on the results and previous research above, the research discussion is determined as follows:

The Effect Economics of Climate Change on Business Sustainability

Economic climate change has far-reaching and complex consequences for many facets of human life, including business continuity and government policy. These effects include changes in government legislation and policies, shifts in consumption and investment patterns, and physical changes in the corporate environment. In this setting, company sustainability must be evaluated from a variety of angles, including regulatory compliance, environmental performance, and innovation and adaptability. Climate change has compelled governments around the world to enact more stringent rules and policies in order to reduce greenhouse gas emissions, protect the environment, and promote sustainable economic practices. Many governments, for example, have imposed carbon taxes, reduced industry emissions, and provided incentives for renewable energy and other ecologically friendly technology. These changes affect a wide range of economic sectors, including energy, transportation, manufacturing, and agriculture, by altering production costs, profits, and market structures. Companies must comply with these regulations and policies in order to ensure business continuity, as well as build corporate strategies that are consistent with evolving regulatory orientations.

Climate change has an impact on people's consumption and investment patterns, in addition to changes in government legislation and policies. Weather and climatic changes can have an impact on customer preferences for specific products and services, driving demand for more environmentally friendly and sustainable solutions. Rising global temperatures, for example, and shifting rainfall patterns may raise demand for energy-saving technologies or those that use renewable natural resources. Companies that are unable to adjust their products and services to changing consumer patterns may experience a decline in demand and sales. Climate change also has an impact on corporate sustainability in terms of environmental performance. Businesses that rely on natural resources, such as agriculture, fishing, and tourism, are especially vulnerable to catastrophic environmental events like droughts, flooding, and tropical storms. Environmental degradation can also affect supply chains and corporate operations, increasing the likelihood of production failures and recovery expenses. To guarantee long-term business viability, businesses must emphasize environmentally friendly operations, contribute to environmental restoration, and reduce their ecological imprint.

Climate change can also drive business innovation and adaptability. Companies who can adapt to climate change, develop new technology, and produce innovative solutions will have a competitive advantage in a constantly changing market. For example, rising demand for renewable energy has fueled advancements in solar, wind, and hydrogen energy technology. Companies who can implement this technology and diversify their product offerings to include renewable energy solutions will be able to preserve a competitive advantage in a changing business environment. As a result, climate change has a substantial impact on company sustainability, including regulatory compliance, environmental performance, innovation and adaptation. To ensure long-term survival and success, businesses must understand and manage climate change threats, create responsive business plans, and prioritize sustainable and environmentally friendly business practices.

Economics of Climate change affects business sustainability, this is in line with research conducted by: (Gössling et al., 2020), (Junsheng et al., 2020), (Motlagh et al., 2020), (Salim & Sidiq, 2022)

The Influence of the Development of the Internet of Things on Business Sustainability

The growth of the Internet of Things (IoT) has had a substantial impact on many aspects of business continuity, including regulatory compliance, environmental performance, innovation, and adaptation. These impacts include greater acceptance of technology, the availability of network infrastructure, and the ongoing development of technological innovation. First and foremost, the growing adoption of IoT technology has increased the use and deployment of IoT solutions across a wide range of industries. Companies that use IoT technology have the ability to improve operational efficiency, product and service quality, and overall consumer experience. Thus, using IoT technology can help businesses maintain and improve their sustainability by enhancing competitiveness and efficiency.

Furthermore, the availability of a suitable network infrastructure is a critical requirement for effective IoT implementation in business. Companies that have a strong and stable network infrastructure can efficiently send and receive data between connected devices. For example, the introduction of faster and more reliable 5G networks has enabled the creation and implementation of more advanced and complicated IoT solutions. Thus, the availability of suitable network infrastructure might aid in business continuity by supporting the incorporation of IoT technologies. Furthermore, technological innovation drives advancements in existing IoT solutions and opens up new business prospects. Sensors, hardware, software, and analytical platforms have progressed, allowing for the development of high-performance IoT solutions. This breakthrough has the potential to help businesses solve complicated problems, improve operational efficiency, and offer value to their consumers. As a result, IoT technology innovation is critical to guaranteeing company continuity in today's ever-changing digital landscape.

The impact of IoT advances on business continuity can also be seen in various specialized areas, such as regulatory compliance. Regulations governing data privacy, information security, and consumer protection are becoming more strict in the digital age. To minimize legal and reputational problems, companies that use IoT solutions must ensure that they follow all applicable legislation and standards. As a result, regulatory compliance is critical for ensuring business continuity in an ever-changing environment. Furthermore, environmental performance is a big concern for companies that implement IoT solutions. While IoT can assist improve energy efficiency and lower carbon footprints, its deployment can also have unintended environmental consequences. For example, excessive use of IoT devices or improper data handling might result in high energy consumption and pollution. As a result, businesses should pay attention to the environmental performance of their IoT solutions and work to minimize their negative affects as much as feasible.

Finally, creativity and flexibility are critical to maintaining business continuity in the ever-expanding IoT era. Companies must continue to develop and implement new technologies, ensure proper network infrastructure availability, and innovate in their use of IoT solutions to improve operational efficiency and meet customer expectations. In addition, they must be prepared to adapt to rapid environmental and market changes, as well as new technical and regulatory advances. Overall, the development of the Internet of Things has a considerable impact on business continuity. Companies can ensure their competitiveness and relevance in this ever-changing digital world by using IoT technology intelligently, according to necessary legislation, paying attention to environmental performance, and continuously developing and adapting.

The development of the internet of things has an impact on business sustainability, this is in line with research conducted by: (Chong & Ali, 2021) and (Rajesh et al., 2022).

The Effect Economcis of Climate Change on Competitive Advantage

Changes in the economic climate, such as changes in government regulations and policies, consumption and investment patterns, and physical changes in the business environment, can have a substantial impact on a company's competitive edge. These factors include a positive brand reputation, operational efficiency, and product or service quality. First and foremost, government rules and policies enacted in response to climate change can have an impact on a company's competitive advantage. Stricter regulations governing greenhouse gas emissions, environmental protection, and sustainable business practices may push corporations to adjust their manufacturing processes, resource allocation, and marketing tactics. Companies that can adapt to changing rules and implement more environmentally friendly business practices may obtain a better image among consumers, increasing their competitive edge.

Climate-related shifts in consumption and investment patterns can also have an impact on a company's brand perception. Consumers who are increasingly concerned about the environment want products and services that are environmentally friendly or sustainable. Companies who can identify these trends and provide products or services to fulfill the needs of this increasing market might establish themselves as industry leaders. Furthermore, shifting investment patterns in favor of environmentally responsible businesses can boost the company's brand reputation and competitive advantage. Second, climate change can have an impact on a company's operating efficiency, which is an important aspect in maintaining a competitive advantage. Extreme weather patterns, rising temperatures, and changes in the availability of natural resources can all disrupt a company's supply, manufacturing, and distribution systems. Companies who can react rapidly to these developments, improve operational resilience, and optimize their business processes will gain a considerable competitive edge. For example, investments in technology and infrastructure that enable catastrophe risk management and post-disaster recovery can assist businesses in maintaining steady and consistent operational performance.

Third, climate change can have an impact on the quality of a company's products and services. Climate change can have an impact on raw material availability, manufacturing processes, and product delivery, affecting the overall quality of products or services. Companies that can adjust their production processes to climate change while maintaining high quality standards will retain a strong brand reputation and a competitive advantage in the market. Thus, changes in the economic climate have a substantial impact on a company's competitive edge, since they affect brand recognition, operational efficiency, and product/service quality. Companies who can adapt rapidly to these changes, implement sustainable and environmentally friendly business practices, and promote innovation will have a significant competitive advantage in this ever-changing business climate.

Economics of Climate change affects competitive advantage, this is in line with research conducted by: (Darsana & SE, 2023) and (Nur & Kurniawan, 2021).

The Influence of the Development of the Internet of Things on Competitive Advantage

The emergence of the Internet of Things (IoT) has had a substantial impact on a company's competitive edge, due to greater technology acceptability, network infrastructure availability, and ongoing technological innovation. These three factors contribute to a positive brand image, operational efficiency, and product or service quality. First and foremost, the growing acceptance of IoT technology has altered the way businesses run and connect with customers. As more gadgets and systems connect to the internet, businesses will be able to collect, analyze, and use data to make better business decisions. The usage of sensors and linked devices also enables businesses to optimize production processes, improve operational efficiency, and deliver better customer service. As a result, firms that wisely use IoT technology can establish a strong brand reputation as innovators and technological leaders.

Second, the availability of a robust network infrastructure is critical for the successful application of IoT in business. Advanced network infrastructure, such as 5G networks, provides quick and dependable data flow between IoT devices and supports applications requiring low latency and high bandwidth. Companies that have proper network infrastructure can implement IoT solutions more efficiently and effectively, broaden their service offerings, and provide better client experiences. As a result, these businesses may acquire major competitive advantages in an increasingly interconnected world. Furthermore, technical innovation drives advancements in existing IoT systems and opens up new potential to increase operational efficiency and product or service quality. Sensor, hardware, software, and data analytics advancements have made it possible to create more sophisticated and high-performance IoT solutions. For example, firms can employ artificial intelligence and machine learning technology to find new patterns, trends, and possibilities in data generated by IoT devices. Companies that use these technologies can enhance operational efficiency, lower production costs, and generate higher-quality products or services. In this setting, a strong brand reputation is critical for distinguishing a company from its competitors. Companies who employ IoT technology to improve the quality of their products or services, provide exceptional customer service, and introduce novel solutions to the market will establish a strong brand reputation as industry leaders. A strong brand reputation can boost customer trust, loyalty, and a company's market share. As a result, a strong brand reputation is an important asset that can boost a company's competitive edge in a competitive market.

Operational efficiency is also critical in maintaining a company's competitive advantage. Companies can increase productivity, eliminate waste, and boost profitability by automating operations, lowering labor costs, and optimizing resource use. High operational efficiency enables businesses to offer products or services at more competitive pricing, reduce time-to-market, and adapt swiftly to market changes. As a result, organizations can maintain their industry leadership and gain long-term competitive advantages. IoT technology can help businesses monitor and control the quality of their products or services more effectively. Sensors and connected devices can be used to gather information on product performance, consumer needs, and market trends. Sophisticated data analytics can be used to uncover possible issues or flaws in a product or service, allowing businesses to take proactive corrective action. Companies that improve the quality of their products or services can boost their brand reputation, increase customer happiness, and preserve client loyalty over time.

Overall, the emergence of the Internet of Things has had a substantial impact on a company's competitive edge, owing to greater technology acceptability, network infrastructure availability, and continuing technological innovation. Companies who can effectively use IoT technology to develop a strong brand reputation, enhance operational efficiency, and improve product or service quality will have a huge competitive advantage in this ever-changing and increasingly connected corporate world.

The development of the internet of things has an impact on competitive advantage, this is in line with research conducted by: (Hizbandyah et al., 2023) and (Maulina, 2023).

The Effect of Business Sustainability on Competitive Advantage

Business sustainability includes not only long-term operational continuity, but also adaptation to external elements like as rules, the environment, and the ability to innovate. Business continuity has a substantial impact on a company's competitive advantage, including its brand reputation, operational efficiency, and the quality of the products or services it provides. First and foremost, regulatory compliance is a critical component of company continuity. Regulations enforced by governments and regulatory agencies are intended to defend the public interest, which includes environmental protection, public health, and consumer rights. Companies who follow these standards display a high level of social

responsibility and commercial ethics, which can help their brand reputation. Furthermore, when a corporation violates regulations, it might face significant fines, litigation, and serious brand harm.

Second, environmental performance plays a significant role in business sustainability. In an era of rising environmental consciousness, customers and other stakeholders are increasingly interested in environmentally sustainable company operations. Companies that prioritize environmental performance, such as the use of renewable energy, waste reduction, and sustainable raw materials, can build a reputation as leaders in responsible business practices. This can also provide prospects for environmental certification and access to a larger market. Apart from that, innovation and adaptation are critical to sustaining a competitive advantage. Companies that are constantly innovating in their products, services, and business processes have the ability to differentiate themselves from competitors and fulfill changing client demands. The ability to respond swiftly to changes in the business environment, technology, and markets is also essential. Companies who can quickly adjust to these developments will be able to maintain and improve their competitive position.

A company's competitive edge is also reflected in its brand image. A strong brand reputation influences client perceptions while also reflecting the quality of the products or services provided. Companies that are regarded for producing high-quality products or services, providing excellent customer service, and operating with integrity will have a considerable edge in acquiring and maintaining customers. In addition, a good brand reputation can give security against potential crises or corporate issues. Furthermore, operational efficiency plays a crucial role in retaining a competitive advantage. Companies who can improve their business processes, cut expenses, and increase productivity will have a substantial competitive advantage. Operational efficiency can be achieved by using appropriate technology, managing the supply chain effectively, and investing in personnel training and development. Companies that improve operational efficiency can offer products or services at lower prices while keeping solid profit margins.

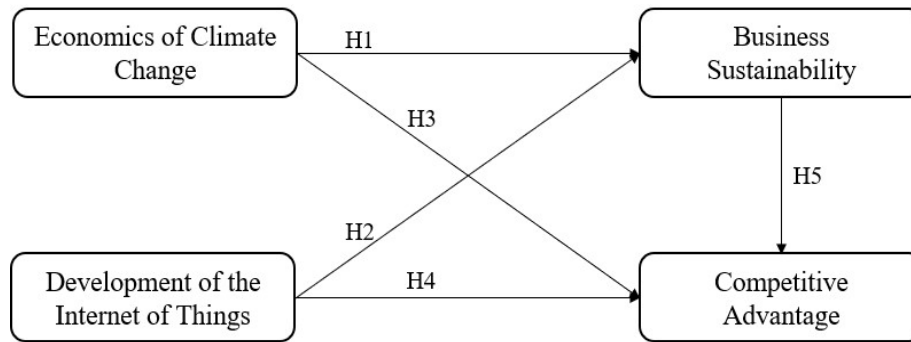
Thus, the impact of business sustainability, which comprises regulatory compliance, environmental performance, innovation, and adaptation, is significant for a company's competitive advantage. A strong brand recognition, operational efficiency, and the quality of products or services provided are critical components in establishing and retaining a competitive advantage in a competitive and ever-changing marketplace. To maintain long-term success, businesses must focus on and manage key components of company continuity.

Business sustainability influences competitive advantage, this is in line with research conducted by: (Sopandi et al., 2022), (HABIIBII & RAHARJO, 2022), (Fitriani et al., 2022).

Conceptual Framework

Based on the research results, previous research and the discussion above, the following framework of thought has been determined:

Picture 1. Conceptual Framework



Based on Figure 1 above, it shows that climate change and the development of the internet of things have an impact on business sustainability and competitive advantage. However, apart from the independent variables which influence the dependent variable, there are also variables which influence, among others:

- 1) Corporate Image: (Saputra & Sumantyo, 2022), (Syahwi & Pantawis, 2021), (Ricardo, 2021).
- 2) Promotion: (Hermawan, 2021), (Foeh et al., 2022), (Hadita, 2019).
- 3) Innovation: (Hendayana et al., 2019b), (Rony et al., 2020)m (Hendayana et al., 2019a), (Nursal et al., 2022).

CONCLUSION

Based on the problem formulation, results and discussion, previous research and the conceptual framework above, the conclusions of this research are:

- 1) Climate change affects business sustainability.
- 2) The application of the internet of things has an impact on business continuity.
- 3) Climate change affects competitive advantage.
- 4) The application of the internet of things has an impact on competitive advantage.
- 5) Business sustainability influences competitive advantage.

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