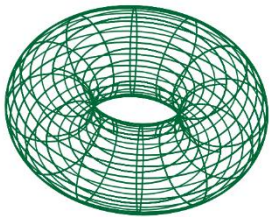


The Implementation of Blockchain Technology in the Travel Insurance Industry: Case Studies of Fizzy and Etherisc



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Abstract

Blockchain technology is receiving increasing interest in the travel insurance industry, as it is considered a revolutionary technology that could solve problems and inefficiencies present in traditional insurance models, which can be time-consuming, inefficient, and subject to errors. Blockchain-based platforms offer greater transparency, efficiency, and security, which are key aspects of the travel insurance industry. This paper aims to explore the possibilities that present themselves when the said technology is implemented in the travel insurance industry. Two specific use cases of blockchain-based smart contract technologies are presented: Fizzy and Etherisc. On the one hand, Fizzy is an example of a failed use case for blockchain adoption in the travel insurance industry, while Etherisc is an example of a case that has been successful. The analysis of the two cases is conducted using the SWOT Framework, identifying the strengths and weaknesses of the two projects, as well as the opportunities and risks that this market presents. The comparison between these two cases shows that the adoption of blockchain technology has great potential at disrupting the market. There are several opportunities such as lowering the costs, gaining customer trust, and lowering the error potential. However, obstacles must be faced to profit from these opportunities.

Table of Contents

Abbreviation	IV
List of Tables	V
1. Introduction.....	1
2. Literature review	2
2.1 Blockchain technology and its characteristics	2
2.2 Travel insurance industry and its challenges	3
2.3 Potential benefits and drawbacks of blockchain technology in travel insurance.....	3
3. Case description	4
3.1 Fizzy	4
3.2 Etherisc.....	5
4. Methodology.....	7
4.1 Research design.....	7
4.2 Sampling strategy.....	7
4.3 Data collection methods.....	7
4.4 Data analysis	8
4.5 Limitations and assumptions.....	8
5. Findings	9
5.1 SWOT Analysis Fizzy	9
5.2 SWOT Analysis Etherisc	10
5.3 Comparison	12
6. Discussion.....	14

7. Conclusion 15

8. References..... 16

Abbreviations

DAO	Decentralized autonomous organization
DLT	Distributed ledger technology
Insurtech	Insurance + technology, the term refers to the use of technology innovations in insurance
P2P	peer-to-peer
SWOT	Strengths-Weaknesses-Opportunities-Threats

List of Tables

Table 1	10
Table 2	12

1. Introduction

Blockchain technology has been gaining immense attraction in recent years with applications that range from financial services to healthcare. Yu and Yen (2018) observed that the insurance industry seems to be the only one yet to pick up this new technology. This paper focuses on the use of blockchain in the travel insurance industry.

A common problem in the travel insurance industry is the agony of pursuing a claim. The process often takes a long time and might be dropped completely for reasons unknown to the customer. On the other side, fraudulent claims cost the travel insurers a lot of money (Kapadiya et al., 2022).

Blockchain can be used to automate the process of verifying claims, ensuring that they are valid, and quickly paying out claims. It can also give travellers access to more transparent and secure documentation, which can help limit the time it takes to dispute a claim. Overall, the advantages of incorporating blockchain into flight delay insurance are numerous and both travellers and providers can benefit from a more efficient and reliable insurance experience.

Our hypothesis states that the implementation of blockchain technology in the travel insurance industry has the potential to significantly disrupt traditional insurance models and create new opportunities for innovative products and services. By discussing two use cases of innovative technologies that have been implemented by companies in different industries, we aim to showcase the strengths, weaknesses, threats, and opportunities of such implementations to insurers aiming to tap into new markets or develop products with the mentioned characteristics.

This report starts by performing literature research to fully comprehend blockchain technology, its features, and the difficulties the travel insurance sector is now facing. We also look at the advantages and disadvantages of using blockchain technology in travel insurance. After setting the foundation, we carry on with a thorough case description of two businesses, Fizzy and Etherisc, that use blockchain technology in the travel insurance sector.

A SWOT analysis of employing blockchain technology in travel insurance is used to illustrate our findings. This analysis will show the strengths, weaknesses, opportunities, and threats of applying blockchain technology in this sector for both Fizzy and Etherisc. We also note any restrictions and presumptions that could compromise the reliability of our conclusions.

2. Literature review

This section gives a comprehensive overview of the current state of knowledge on the use of blockchain technology in the travel insurance industry. To begin, we introduce the concept of blockchain technology and its key characteristics. This provides a foundation for understanding how this technology can be applied to the travel insurance industry. Next, we present an overview of the travel insurance industry and the challenges faced by insurers in providing these services. Lastly, the potential benefits and drawbacks of blockchain technology in travel insurance are discussed.

2.1 Blockchain technology and its characteristics

Distributed ledger technology (DLT) is a system that allows value transactions to take place on a peer-to-peer (P2P) network without the need for a central authority to function as an intermediary (Li & Kassem, 2021). Popovic et al. (2020) claims that blockchain is the most fortunate distributed ledger technology and should be regarded as a subset of DLT rather than a benchmark. At its most basic, blockchain is a database that is shared by many users, where each participant can verify, distribute, and store data. It distinguishes itself from earlier technology as it offers a single source of truth, which makes it fully immutable (Popovic et al., 2020).

Like software that operates on a computer platform, self-executing code distributed on the blockchain is referred to as a smart contract, i.e., computer protocol using the blockchain to digitally facilitate, verify, and execute agreements between two or more parties (Li & Kassem, 2021). As Wang et al. (2019) have emphasized, a smart contract will have its source code published and verified on the blockchain, making it impervious to tampering. Without centralized control and the coordination of outside authorities, the execution of a smart contract is enforced among anonymous, trustless individual nodes (Wang et al., 2019).

According to Popovic et al. (2020), the automated execution of a legal contract or agreement might be implemented using them, even if they might not technically be considered "contracts" in the traditional sense. The research also indicates that even though self-executing code is nothing new, smart contracts have the potential to enable the automation of business logic and minimize operational frictions and expenses and therefore increase business process efficiency.

Popovic et al. (2020) argue that throughout the whole insurance value chain, from product underwriting to claims processing, blockchain technology has the potential to be used in a variety of insurance-related applications and it may act as a facilitator for accelerating digitization, changing people's perspectives on change and transition, and creating more innovative products.

2.2 Travel insurance industry and its challenges

Kilroy and Megna (2022) say that the insurance industry can be divided into life insurance, health coverage, automobile insurance, homeowners' insurance, insurance against fire, and travel insurance. As Leggat et al. (1999) have demonstrated, travel insurance covers a range of risks, such as trip cancellation, baggage loss, medical emergencies, and flight delays or flight cancellations. Dominated by a few big players, the industry has its niche markets for smaller specialized insurance companies.

A big challenge for the travel insurance industry is facing the high costs of claims processing (Sehgal, 2017). Insurance policies require the customer to navigate a compound claim process and submit sustainable documentation to receive compensation for the covered events. This leads to long wait times for the customer and thus lowers customer satisfaction. According to Leggat and Leggat (2002), this has an even greater effect when travelers are dealing with the inconveniences of flight delays.

Customer needs and preferences keep changing and the travel insurance industry is not an exception. Therefore, it is imminent for the insurance industry to be able to adapt to them. Grima et al. (2020) imply that with new risks emerging due to the travel industry evolving, insurance companies must provide flexible coverage and modify their products and services to meet the ever-changing needs of travelers.

Finally, the travel industry faces challenges from within the industry itself. Competition among the insurance companies is fierce and there will be new players trying to enter or even disrupt the market. As technology keeps continuing to disrupt the insurance industry, travel insurance providers must be able to implement new technologies such as blockchain and use them to their advantage to stay competitive and provide new products and services (Kalsgonda & Kulkarni, 2022).

2.3 Potential benefits and drawbacks of blockchain technology in travel insurance

Blockchain technology has the potential to address many of the challenges which the travel insurance industry is facing. Particularly the ones addressed above, high claims processing costs, low customer satisfaction rates, and the need to adapt to changing customer needs and preferences.

By utilizing smart contracts on the blockchain travel insurance providers can streamline the claims process. Due to the nature of smart contracts, they automatically verify claims based on predefined criteria. The process of paying out claims is sped up due to the now redundant human intervention (Gatteschi et al., 2018a). Blockchain technology enhances transparency and trust due to the characteristics of the blockchain of having a transparent and immutable record of all transactions stored on it. Kar and Navin (2021) point out that the insured can be provided with real-time updates on

their claims which also improves customer satisfaction. Furthermore, insurance policies can be personalized by creating customized, usage-based insurance tailored to the individual needs of a traveler (Gatteschi et al., 2018a). Lastly, with the tamper-proof system of blockchain, Gaettschi et al. (2018b) suggest that the fraud risk can be reduced and security improved.

Blockchain technology is complex and needs specialized experts to implement and use. This can be a constraint for smaller insurance companies because of the investment in technology and personnel. Lu (2019) claims that a big issue of blockchain technology is its scalability. This could prove to be a challenge for large volumes of travel insurance claims, as Wang et al. (2019) identified that it might cause a slowdown in processing and rising transaction costs. These factors could lead to customer dissatisfaction. Furthermore, there are vastly missing regulatory frameworks and standards for blockchain in the insurance industry. Finally, integrating this new technology within the existing insurance system can be challenging claims Grima et al. (2020). We see that blockchain technology holds promising transformation in the insurance and travel insurance industry, however, it is important to consider the negative aspects that come along with it.

3. Case description

First, we look at Fizzy, an online platform for buying and selling insurance policies developed by AXA, a French insurance giant. Fizzy is a web-based tool that allows customers to compare different insurance products and purchase coverage with ease. It uses artificial intelligence and machine learning technologies to match customers with the best insurance product for their needs. Furthermore, it provides customers with real-time notifications and updates on the status of their policy, allowing them to make better decisions.

The second use case we discuss is Etherisc, a blockchain-based platform developed by a startup of the same name. Etherisc facilitates the management of digital assets and represents a major innovation in the financial services industry. It allows customers to store, trade, and transfer digital assets in a secure, decentralized manner. The platform also provides a suite of tools and services to enable users to easily manage their digital assets. Additionally, Etherisc offers enhanced security features such as two-factor authentication, encryption, and tokenization.

3.1 Fizzy

Launched in 2017, Fizzy is an insurance offering by AXA, a French multinational insurance company, that utilizes the Ethereum blockchain to provide coverage for flight delays. Fizzy is a leading travel insurance company that offers innovative insurance solutions to customers worldwide and uses blockchain technology to create a seamless and efficient insurance experience (Hoffmann, 2020).

Fizzy offers an innovative insurance product that provides coverage for flight delays exceeding two hours. This service addresses the common problem of flight delays, which can cause significant inconvenience and financial losses for travelers (AXA, 2017).

What sets Fizzy apart from other travel insurance providers is its use of blockchain technology to automate and streamline the claims process. Popovic et al. (2020) explain that blockchain technology is a decentralized digital ledger that records transactions securely and transparently. Fizzy uses blockchain technology to create smart contracts that automate the claims process, which according to Hutta (2018), eliminates the need for manual intervention and reduces the risk of fraud.

The benefits of using blockchain technology are significant. Firstly, blockchain technology enables Fizzy to settle claims quickly and efficiently, often within a matter of hours, rather than days or weeks as with traditional insurance providers. This means that travelers can get back to enjoying their trip without the added stress of dealing with complicated insurance claims. Secondly, blockchain technology provides a high level of security and transparency, ensuring that claims are processed fairly and without any fraudulent activity.

After two years of operation, Fizzy, despite its brilliant idea and innovative approach, was shut down by its parent company AXA. The reason for the closure was due to the platform's inability to reach its commercial targets, reveals Hoffmann (2020), which ultimately made it an unprofitable venture for the company.

Despite its promise, Fizzy was unable to attract enough customers and generate sufficient revenue to sustain the business. This may have been due to various factors, including competition from established insurance providers, limited awareness among potential customers, or challenges in scaling the business.

Although it shut down, Fizzy's use of blockchain technology and smart contracts for insurance remains a promising concept with future insurance sector innovation potential. Fizzy's experience demonstrates the difficulties of bringing new and innovative concepts to market, especially in established sectors, and emphasizes the need for meticulous planning, market research, and execution in the success of any new enterprise.

3.2 Etherisc

Etherisc is a decentralized and open-source insurance platform that uses blockchain technology to provide transparent and automated insurance products. The vision and technical architecture of the platform are outlined in their whitepaper, with a focus on leveraging blockchain technology to minimize inefficiencies and costs in the insurance industry by creating a decentralized insurance marketplace. (Bernstein et al., 2022)

Etherisc collaborates with independent developers to create and offer smart-contract-based insurance products. The platform will be constructed on the Ethereum blockchain and aims to automate the entire insurance process, from policy creation to claims settlement. The platform's use of risk pooling pools is a noteworthy feature that allows policyholders to pool their risk and share the cost of claims, creating a more equitable and efficient insurance market, particularly for underserved communities that may have difficulty obtaining traditional insurance products. (Bernstein et al., 2022)

Bernstein et al. (2022) state that the Etherisc platform offers users to obtain a flight delay insurance policy by entering information about their travel and paying the premium. The policy is a smart contract registered on the Ethereum blockchain that automatically activates if an aircraft is delayed as specified in the policy. The smart contract analyzes current flight information to decide if and how much a flight is delayed.

To do so, the smart contract requires the input of trusted data feeds to determine whether the triggering conditions are met. Those trusted data feeds are called Oracles, explain Wang et al. (2019), and play a central role as they provide smart contracts with off-chain data and therefore ensure the deterministic execution of the contract. Therefore, a payout to the consumer is automatically started by the smart contract if the delay satisfies the criteria outlined in the policy.

The previous solutions for smart contract applications in the insurance industry have been analyzed and there are distinct differences between the approaches taken by Etherisc and Fizzy. Hoffmann (2020) points out that Etherisc aims to completely disrupt the market and create a decentralized platform that allows anyone to build an insurance product but faces challenges in establishing trust and developing a customer base.

Fizzy, on the other hand, was developed in-house by AXA and faced difficulties in meeting financial targets, but still managed to sell a significant number of contracts (Hoffmann, 2020). However, shortcomings such as slow payouts and the high cost of acquiring blockchain expertise hindered its success. There is a need for a tech company that can provide knowledge to existing insurance companies, leveraging their brand name and addressing trust issues. Hoffmann (2020) believes that this business model has the potential to succeed in the insurance market.

4. Methodology

The methodology section provides a detailed description of the research methods and procedures that were used to answer the research questions. First, the overall research design of the study is introduced. Next, the sampling strategy explains why the two cases were selected and why they are relevant to our research. Chapter 4.3 describes the data sources that were considered for our study. Then, the data analysis explains how the collected data is analyzed. Lastly, some limitations and assumptions that may affect the validity and reliability of our study are addressed.

4.1 Research design

This qualitative study's research design was centered on examining two use cases for blockchain adoption in the travel insurance sector: Fizzy and Etherisc. Each use case underwent a SWOT analysis, a simple framework that points to the importance of both external and internal factors in understanding its unique strengths, weaknesses, opportunities, and threats (Barney, 1995). The outcomes of these investigations were contrasted to shed light on the elements that influence whether blockchain adoption in this sector is successful or not.

4.2 Sampling strategy

The cases of Fizzy and Etherisc were selected for this study based on their relevance to the research question. The Fizzy case was selected for this study as it is an example of a use case that was unsuccessful in adopting blockchain technology in the travel insurance industry. This case was important to analyze because it provided insights into the challenges and limitations associated with the adoption of blockchain technology in this industry. On the other hand, Etherisc was selected because it is still in use and has shown the potential in disrupting traditional insurance models. This case was important to analyze because it provided insights into the potential benefits and opportunities associated with the adoption of blockchain technology in the travel insurance industry. Comparing these two cases helped to better understand the factors that contribute to the success or failure of blockchain adoption in this industry.

The sampling strategy for this study was designed to provide a complete assessment of the application of blockchain technology in the travel insurance business with an emphasis on the examples of Fizzy and Etherisc. The obtained information enabled a thorough examination of the factors that affect whether blockchain adoption in this industry is successful or not.

4.3 Data collection methods

The examination of secondary sources served as the main method of data collection for this project. The sources included journal articles, company reports, and other publicly available data sources.

4.4 Data analysis

The data analysis for this study involved a SWOT analysis of the adoption of blockchain technology in the travel insurance industry. The analysis was based on the data collected from the selected use cases - Fizzy and Etherisc - as well as other secondary sources.

Using the SWOT analysis methods, the internal and external environment of Fizzy and Etherisc were analyzed to assess their strategies. The methodology employed for this analysis involved gathering data and information to identify the strengths, weaknesses, opportunities, and threats of each project. Strengths and weaknesses refer to the internal environment, thus aspects related to the project itself, while opportunities and risks, on the other hand, are related to the external environment, they are factors that can positively or negatively influence the project (Houben et al., 1999).

4.5 Limitations and assumptions

One weakness of this study is the utilization of secondary sources for data collection. While the selected sources gave a complete overview of blockchain adoption use cases in the travel insurance market, the lack of primary data may have restricted the depth of the investigation.

Another drawback is that just two use cases were chosen for examination. While these examples gave useful insight into the usage of blockchain technology in the travel insurance sector, they may not have reflected the industry to the full extent.

Furthermore, this study assumes that the characteristics influencing blockchain adoption in the travel insurance business are constant across different geographies and settings. Differences in regulatory regimes, cultural norms, and other variables, on the other hand, could have had an impact on the results.

5. Findings

This section presents the results of the SWOT analysis of Fizzy and Etherisc projects. Specifically, the internal environment is explored by selecting the strengths and weaknesses of the projects, as well as the external environment by identifying the opportunities and challenges that the market exhibits. Furthermore, a comparison between the two projects is presented, evaluating two different strategic positions operating in the same industry.

5.1 SWOT Analysis Fizzy

Some important strengths of blockchain adoption in the travel insurance business were identified through the SWOT analysis. Firstly, as it is stated by Popovic et al. (2020), blockchain technology delivers a unique solution that increases consumer security, transparency, and confidence. This can serve to boost industry confidence and raise adoption rates. Second, the use of blockchain technology allows insurers to deliver fast, efficient, and tailored services to their customers (Kar & Navin, 2021). Fizzy's customer-centric strategy prioritized consumers' demands, making the claim process more user-friendly and, as a result, increased customer satisfaction and loyalty. Lastly, Fizzy benefitted from being a subsidiary of AXA, a well-known brand with a solid reputation in the insurance business. This lent credibility and aided in the development of client trust.

Furthermore, the SWOT analysis identified several flaws. These include that Fizzy only covered flight delays and cancellations, limiting the scope of their policy offering in comparison to traditional insurance companies. Moreover, its repayment system was not efficient according to Hoffmann (2020) compared to other blockchain-based solutions, taking up to seven days for Fizzy's client to receive payment. Besides that, blockchain solutions within insurance, as a relatively new offering in the market, have limited awareness among potential customers, which may have hindered its growth (Grima et al., 2020). Additionally, Fizzy may not have received the same level of resources and attention as AXA's core company because it was an experimental product produced as part of AXA's innovation activities. This might have impeded its capacity to grow and reach a larger market.

Some notable opportunities that could have helped the company expand and grow are given through the limited competition in the market for blockchain-based travel insurance. Fizzy could have established itself as a leader in this emerging market, which moreover, could have led to increased demand and revenue. Additionally, there was a possibility for Fizzy to increase its market share in the travel insurance sector by offering more coverage options and expanding its reach to more countries. Another opportunity was to establish partnerships with airlines, travel agencies, or other companies in the travel industry. By working together, Fizzy could have leveraged the partner's customer base and potentially gained new customers.

On the other side, since the industry itself is not yet fully established various threats potentially hindered Fizzy’s success. Legal and regulatory challenges may have arisen due to the use of blockchain technology and the need for compliance with different laws in different countries (European Insurance and Occupational Pensions Authority, 2021). Finally, there could have been a negative perception of blockchain technology due to its association with cryptocurrencies and their sometimes-controversial uses. This could have led to a lack of trust and reluctance from potential customers to use Fizzy's blockchain-based travel insurance products. Table 1 shows the results of the SWOT analysis.

Table 1

SWOT Analysis Fizzy

	Positive	Negative
Internal Factors	<p><u>STRENGTHS</u></p> <ul style="list-style-type: none"> ▪ Innovative ▪ Custom centric ▪ Strong brand 	<p><u>WEAKNESSES</u></p> <ul style="list-style-type: none"> ▪ Limited coverage ▪ Limited awareness ▪ Experimental product ▪ Payout structure not optimal
External Factors	<p><u>OPPORTUNITIES</u></p> <ul style="list-style-type: none"> ▪ Only few competitors ▪ Increase market share ▪ Partnerships with companies in the industry 	<p><u>THREATS</u></p> <ul style="list-style-type: none"> ▪ Industry not established yet ▪ Legal and regulatory challenges ▪ Negative perception through association with cryptocurrencies

Note: Own work.

5.2 SWOT Analysis Etherisc

Etherisc has several strengths that make it a competitive player in the travel insurance industry. One of its major strengths is the fast and efficient claims process and payment, which provides customers with a seamless experience. In addition, Bernstein et al. (2022) state that Etherisc offers comprehensive coverage that goes beyond flight delays and cancellations, including coverage for medical emergencies and lost luggage and it has differentiated itself by developing products be-

yond travel insurance, such as crop insurance. This is a key differentiator that sets it apart from other travel insurance providers. Another strength of Etherisc that is emphasized by Bernstein et al. (2022) is its collaboration with companies in different industries such as Chainlink, Aon, and Oxfam, which has helped to enhance its reputation and credibility in the market. Overall, these strengths position Etherisc as a strong player in the travel insurance industry.

Despite its strengths, Etherisc also faces several weaknesses that could hinder its success in the travel insurance industry. The platform's vulnerability to security threats, such as hacking, could erode customer trust and result in financial losses. Additionally, limited awareness of Etherisc as a new offering could make it difficult for the platform to gain market share against more established travel insurance providers. Finally, some potential customers may be sceptical of the platform's complex blockchain technology, which could further impede adoption.

Etherisc has several opportunities to expand its business and increase its market share in the travel insurance industry. The company could form new partnerships with other blockchain-based companies or travel agencies, potentially leading to increased brand awareness and customer acquisition. Additionally, expanding its business to more countries could increase its market share and revenue. Etherisc could also leverage its expertise in blockchain-based insurance to expand into other areas of insurance, such as property or life insurance, further diversifying its revenue streams and mitigating risk. By taking advantage of these opportunities, Etherisc could establish itself as a leader in the blockchain-based insurance industry and create a sustainable competitive advantage.

Despite the strengths of Etherisc, there are also some potential threats to its success in the market. One of the main threats is the competition from both traditional insurance companies and emerging insurtech companies. Etherisc needs to continue to innovate and differentiate itself to stand out in a crowded market. Another potential threat is legal and regulatory challenges, as the regulatory landscape for blockchain technology and insurance is still developing (European Insurance and Occupational Pensions Authority, 2021). Etherisc needs to ensure that it complies with all relevant regulations and legal requirements to avoid any legal issues that could negatively impact its business. Additionally, some customers may have a negative perception of blockchain technology due to its association with cryptocurrencies, which could create a barrier to the adoption of Etherisc's offerings. To mitigate this threat, Etherisc needs to continue to educate consumers on the benefits and security of blockchain technology in the insurance industry. Table 2 on the next page shows the results of the SWOT analysis.

Table 2

SWOT Analysis Etherisc

	Positive	Negative
Internal Factors	<p><u>STRENGTHS</u></p> <ul style="list-style-type: none"> ▪ Fast and efficient claims process ▪ Comprehensive coverage ▪ Collaboration with Chainlink, Aon, Oxfam 	<p><u>WEAKNESSES</u></p> <ul style="list-style-type: none"> ▪ Vulnerable to security threats ▪ Limited awareness ▪ Possible skepticism due to the complexity of the technology
External Factors	<p><u>OPPORTUNITIES</u></p> <ul style="list-style-type: none"> ▪ New partnerships ▪ Expansion to other countries ▪ Expansion to other insurance areas 	<p><u>THREATS</u></p> <ul style="list-style-type: none"> ▪ Strong competitors ▪ Legal and regulatory challenges ▪ Negative perception through association with cryptocurrencies

Note: Own work.

5.3 Comparison

Both, Fizzy and Etherisc, offered innovative products with the potential to disrupt the traditional travel insurance market. Fizzy used smart contracts to automatically trigger refunds based on the occurrence of predefined events, while with Etherisc's project, refunds to customers when their flight is delayed are automated. These products offer faster refund procedures than traditional travel policies. However, some differences emerged from the analysis. The two companies differ first and foremost the project Etherisc enjoys a decentralized platform, which offers flexibility to insurance providers to create customized policies, while Fizzy's focus was to offer a simpler and more transparent claims process than the traditional market. The variety of product offerings by the two companies is different. In fact, Etherisc offers a wide range of coverage in travel insurance but also in other insurance sectors including an entire ecosystem for others to use. In contrast to that Fizzy had a narrow product range reaching a broader customer base.

Another aspect to consider is that Fizzy was part of AXA, which itself is a well-known brand in the travel insurance industry with a high reputation in terms of quality and reliability. However, Fizzy may not have received the same level of resources and attention as AXA's core business, which had an impact on its ability to grow and succeed. Moreover, Fizzy showed difficulty in

finding a suitable distribution channel, compromising the possibility of getting prospective customers to discover and give access to the new product. This affected the ability to reach potential customers in a way that effectively communicated the benefits and features of the product, convincing people to use it. In contrast, Etherisc is a relatively new player in the insurance industry and market penetration is more difficult than Fizzy. However, Etherisc has managed to develop and create important partnerships, bringing it visibility and the possibility to expand the business. However, a significant presence in the market depends mainly on success and openness regarding the adoption of blockchain technology by the public.

In terms of opportunities, both companies operate(d) in an emerging market, with an increasing demand for more efficient and innovative insurance products. Therefore, there was the opportunity to increase the market share by expanding the business to other countries. Etherisc also has the potential to expand its business to other insurance sectors beyond travel, while Fizzy's potential could have been to explore partnerships within the travel industry to increase its reach and customer base in the travel insurance sector.

Both projects have faced threats such as regulatory uncertainty and potential legal challenges, that could have posed a risk to the adoption and growth of their products. In addition to this, the adoption of blockchain technology could be negatively perceived and resisted by customers due to its association with cryptocurrencies. Both companies have faced competition, but in particular, Etherisc faces stiff competition from established insurance companies that have strong brands and customer bases.

6. Discussion

Both Companies are affected by the same main threats, some of which are detrimental to forecasting the future of blockchain-based insurance. One of the most important ones is the still developing legal framework in most countries. It seems that if the smart contracts used in these insurance cases show identical characteristics to traditional insurance, there should be no issues in the adaptation of the regulatory system at least in Switzerland. Meyer & Schuppli (2017) argue that discrepancies between the two, however, will be the problem.

For example, Shetty et al. (2022) address the question of whether a smart contract is legally binding. Another problem is that most countries are still creating regulations for blockchain, and they are not doing it at the same pace. That means, for example, if the customer buys insurance in a country where smart contracts are legally binding, but the insurer is located somewhere, where it is not, it is not clear how it should be handled in case of misconduct.

A reason for adapting blockchain-based insurance products is the opportunity to tap into new and often underserved communities as it is suggested by Shetty et al., (2022). Moreover, offering an ecosystem to create insurance plans that are demanded by the local communities, allows the insurer to obtain new customers. This ecosystem enables new competitors to enter the market, which can both be a threat and an opportunity. More competition usually comes with the need of fighting for the customers, which leads to new more attractive products that succeed. Indeed, it is demonstrated by Bousney and Knudsen (2022) that by having more competitors, price competition is inevitable, which leads to lower prices, better quality service, and more variety and innovation.

The very nature of blockchain with its immutability and traceability creates an environment in which both the insurer and the customer obtain trust. By eliminating the need for third parties, the insurers could gain more independence and reduce the costs, that are required for communication between the parties.

A SWOT analysis of the two companies made comparing Fizzy and Etherisc easier as their strengths and weaknesses could be easily distinguished. However, some characteristics could be oversimplified due to the limited space within the SWOT analysis. Of course, the results of the SWOT analysis might be subjective, but in our case, they could be supported by existing literature.

7. Conclusion

We see that blockchain technology has the potential to transform travel insurance, especially in the context of flight delay insurance. Travel insurance providers can create more efficient, transparent, and customer-focused insurance by leveraging the features and benefits of blockchain technology. With the use of this technology come several challenges that must be considered. Even though the use of Blockchain has seen enormous growth throughout various industries, the insurance industry is lagging according to Yu and Yen (2018). By taking a closer look at two pioneers in the travel insurance industry, we aim to determine whether blockchain implementations could disrupt the said industry.

Both Fizzy and Etherisc leverage blockchain technology to address inefficiencies, high transaction fees, and lengthy claim processing times by applying DLT. This approach allows for the secure recording of data and payments, reducing fraud risk and increasing accessibility to insurance.

Two obstacles, that threaten the implementation of blockchain technology are the missing legal framework and the lack of understanding of blockchain technology. Whereas the first one could prevent a market entry, the second one could hinder people from trusting blockchain-based products. Furthermore, the first problem is harder to influence than the second.

Fizzy and Etherisc have different organizational approaches. Whereas Fizzy is a product by an established insurance company (AXA), Etherisc is a startup that offers an entire ecosystem. The latter is a DAO, which means, there is no singular controlling party. On one hand, using an existing ecosystem will lead to a loss of being the only controlling party for the insurance, on the other hand, such an ecosystem could be used by an existing insurer to offer their insurance. This leads to the challenge of choosing the right technology stack and getting the right IT support. To undermine this challenge Shetty et al. (2022) point out that the cost of adoption depends on the methods and technology chosen to validate and write the blocks, the authentication methods, the digital certificates, and the signatures needed for transactions.

Ultimately, the choice between changing an existing product to blockchain-based or offering a new product based on a new ecosystem depends on the needs of the insurer. To remain the only controlling party, applying blockchain technology as Fizzy did, is the favourable way.

Blockchain technology in the travel insurance industry can be groundbreaking if the mentioned obstacles can be handled appropriately. Learning from the two case studies in this report, it is evident that the lack of customers is one of the urgent problems that should be addressed. To do this we recommend researching how to gain trust among the public and how to educate them about blockchain technology.

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