

BLOCKCHAIN IN MARKETING

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Abstract

Blockchain is one of the particularly recently acclaimed technological solutions, which is believed to soon change many areas of human activities. Blockchain is also more and more often referred to as one of the key innovations related to digital transformation. It was first introduced in 2008 in the area of finance as to serve as a public ledger for bitcoin cryptocurrencies. Now, it is growingly implemented in other areas of human activities such as: financial services, video games, energy trading, supply chains, anti-counterfeiting or healthcare as well as in art, art market and marketing. It is believed that it will significantly affect the development of digital marketing. The priority of this article is to present the basics of blockchain functioning in marketing. The second aim is to show the initial research results of the marketing industry in Poland, particularly in the context of blockchain.

In this article, I analyze the blockchain solution per se, its origin, short history and the application in marketing. Nowadays, we almost live in a digital world, that is why marketing experts need to find and develop new and highly effective ways of reaching to their potential clients. Moreover, this article describes the role of the blockchain in making marketing operations more telling in a digital world. Finally, the areas of blockchain applications in marketing and the possible benefits thereof are analyzed.

Keywords: new technologies, blockchain, marketing, blockchain in marketing, smart contracts, digital marketing

1. INTRODUCTION

The marketing industry is undergoing a profound transformation as a result of the development of technology. One of the technological changes, which has a big impact on the marketing industry is blockchain. Blockchain system is more and more often mentioned in literature and in various Internet sources as one of the breakthroughs and key technologies, which will have a significant impact on developing of human activities, especially in terms of digital transformation, including marketing. However, this technology is complex to understand and can be employed in more than just one area of application in marketing. As I conclude from my research conducted and based on interviews with 18 marketing experts from Poland, the possibility and the potential of application the blockchain system in marketing is not very well known in Polish marketing industry. Contrary to Poland, the use of this system in marketing is becoming more and more popular around the world, yet it is critical to remember that blockchain is changing the digital marketing. However, the most important change in marketing due to blockchain is the fact that it provides transparency (more democratic marketing), immutability (more reliable marketing) and, decentralization (cheaper ads).

The essence of blockchain is the possibility of making transactions without the participation of a third party. Blockchain is associated mainly with finance, still, it is already playing a big role also in marketing (Newman 2019). Blockchain increases the transparency of advertising costs and verifies how the advertisement reaches recipients through their engagement and interactions (Daley 2019).

One of the most important challenges for marketing these days is the lack of consumer trust in brands' message caused by the fear of misuse of user data and the lack of authenticity of products. Building a sense of consumer trust in the brand has therefore become a substantial goal of marketing activities. Such trust can be gained through authenticity and transparency, and this can be achieved by the means of advanced technologies, including exactly the blockchain system. According to the Global Consumer Pulse report, conducted by Accenture Strategy on 24,877 consumers around the world, the lack of security of consumer data and the lack of transparency regarding the use of information contribute to

the loss of trust in brands, which then affects the results achieved by a company (Perry 2018). The report shows that the lack of trust in brands is contributing to the loss of 2.5 trillion dollars annually. What is more, American brands alone are losing \$756 billion and losing 41% of customers (Perry 2018).

The marketing industry is also struggling with an ineffective system of settling advertising campaigns on the Internet resulting from bot traffic and unnecessary expenses that are consumed by intermediaries throughout the advertising campaign implementation system. According to the Forrester study, advertisers' losses in 2016 amounted to \$7.4 billion.

Meanwhile, according to Traffic Guard/Juniper, losses attributable to advertising fraud could amount to \$34 billion and up to \$87 billion by 2022. The WFA estimates that by 2025, advertising fraud will be the most significant area of organized crime, reaching up \$50 billion (Business of Apps 2021).

The solution to these challenges in marketing is precisely the blockchain; a system that offers transparency, security, irreversibility and immutability. That is why it becomes particularly advantageous in the case of a transaction of value between entities. Blockchain provides transparency and security both for such an operation and for the entities that conclude it.

2. THE STATE OF RESEARCH AND THEORIES

2.1. The summary of initial research results

This article about the blockchain system in marketing is the result of my research which I have conducted as a part of my doctoral project and some reflections stemming from my professional experience. The subject of my dissertation is: "Preparation of the Marketing and Communication Industry for Breakthrough Technological Change: Rules of Recognition, Knowledge, and Implementation." The choice of the subject comes from my experience in business within which I worked in a marketing department of a large European listed company with headquarters in Poland. I noticed that there the level of knowledge about new technologies in marketing was far lower than common perception might indicate. What was more surprising, it was a company that aspired to the rank of sales and marketing support leader in Europe. However, it was clear that the firm was far from global standards of other multinational companies in terms of technology development in marketing and sales. That is why the main area of the project research is the technological revolution and the innovative, particularly digital, tools and channels of communication in medium and large companies operating in Poland, and factors of differentiating effectiveness of message efficiency. The aim of the research was to examine the level of knowledge and implementation of the newest technologies applied in marketing in medium and large companies in Poland and the resulting impact on the efficiency of their activities.

The research was conducted from February to July 2021. Before starting the research, I had examined the main marketing trends in search for technological solutions applied in marketing within ten last years. The result of my study showed that blockchain is one of them and is envisioned as a key solution that will change the marketing industry.

Within the wide scope of articles in leading international business magazines there were mentioned, among other trends, the following technological solutions and tactics based on the new technologies used in the area of marketing communication (Expert Panel, Forbes Agency Council 2019, Forbes Agency Council 2019, BabelPR 2019, Koetsier 2017, Agrawal 2016, Newman 2015, Dan 2014): artificial intelligence, bots, chatbots, voice processing (voice search, smart assistants, voice commerce, voice interfaces), influencer tracking technologies, big data, virtual, augmented, extended and mixed reality, virtual reality blockchain, virtual beings (Expert Panel, Forbes Agency Council 2019, BabelPR 2019, Koetsier 2017, Agrawal 2016, Newman 2015, Dan 2014, Goode 2020).

So far, I have conducted the qualitative research, which means eighteenth interviews with marketing experts (middle and senior level managers) from various sectors such as: technological, retail and consumer goods, pharmacy & medical, creative, business services & finance, construction and estates, logistics and transport, energy and, digital advertising agencies. The conducted interviews demonstrated that only three people out of eighteen knew that blockchain is used in marketing, whereas the blockchain

system is getting more and more acknowledged in marketing industry worldwide. It shows an enormous need to educate the Polish marketing industry to raise the potential of Polish business on a global scale.

2.2. Theoretical background – The outline of blockchain technology

Currently, the most important technologies that are widely believed to affect the development of many areas of human activities are: artificial intelligence, virtual reality and blockchain (Gottheil 2018). I would like to stress that blockchain technology is used in many areas of human activity, including art and marketing. A blockchain solution is a decentralized integration of computers and distributed networks that are securely connected to each other. This is a growing list of records that are called blocks and that are connected through cryptography. This technology creates new business solutions significant in the digital age, also in art and marketing (Hacioglu 2020, p. vii). “Blockchain is about trusting information. Like originally the Internet, blockchain has the potential to change everything” (Tapscott; Tapscott 2016, p. 7). As Umit Hacioglu said “(...) in order to create not only fully digital and traceable but also transparent, reliable and secured environments. Blockchain technology serves for developing the transparency, reliability, and security characteristics of these environments (...)” (Çağlıyangil, M, Erdem, S; Özdağoğlu, Güzin A 2020, p. 63).

Blockchain is a system more and more often recognized by the public but mainly as a system used in finance. The origins of blockchain technology are differently defined in literature. For the purpose of this article, I would like to moot a few facts. In 1982 cryptographer David Chaum first proposed a blockchain-like protocol in his treatise “Computer Systems Established, Maintained, and Trusted by Mutually Suspicious Groups” (Sherman, Javani, Zhang, Golaszewski 2019, p.72-73). In 1991, Stuart Haber and W. Scott Stornetta created a concept of system they called a *blockchain*. “It was a system that consisted of a chain of blocks secured by cryptography and digital timestamps that could not be altered” (Deshpande 2019). In 2008, an unknown entity (it was one person or group of people) using the pseudonym Satoshi Nakamoto applied this concept as part of the implementation of Bitcoin, or cryptocurrency, which allowed to carry out transactions without the participation of an intermediary, for example a bank. While the blockchain system is popular within non-financial transactions, it is not widely known in marketing and advertising.

The blockchain, as the term itself, is still little known, and certainly, as long as the word itself (the name) is known, I think not too many people know what exactly stands behind this term. My conclusion is taken from my experience of the research I have conducted so far on a group of marketing experts. People react to the question about the blockchain with confusion. A great, simple, precise and therefore understandable explanation is given by Raja Rajammanar, Chief Marketing and Communications Officer and President of Healthcare Business in MasterCard in his book “Quantum Marketing, Mastering the New Marketing Mindset for Tomorrow’s Consumers” (Rajammanar 2021, p. 79). He underlines the difference between Bitcoin and blockchain since these both terms are confused very often and taken as the same elements. “Bitcoin is a currency. Blockchain is the technology that creates tracks, and manages Bitcoins, and all the other cryptocurrencies, for that matter. As its simplest, blockchain is a virtual book for record keeping. In accounting terms, a book that keeps all the transaction records is called ledger. Normally, an accountant or an accounting department enters the various transactions into a ledger and keeps it up to date. Blockchain is a digital ledger of transactions, with all the associated details.” (Rajammanar 2021, p. 79). Another factor I need to emphasize is that the ledger may inform what happened, for how much, when and on what terms. Also, the relevant and fundamental fact is that it is not managed by one person or one department, but is shared with community, whose members are responsible for validating and timestamping these transactions. This system, designed and managed in this way, is called a distributed ledger (Rajammanar 2021, p. 79).

Raja Rajammanar underlines also that there are many types of blockchain technologies, but whenever a transaction happens, the entire community is informed. Such a transaction is named a block. Once the block (including data) is created, it can no longer be changed and manipulated. The fact that each member of this community is able to see changes in transactions (each change creates a new block) makes the impression that the blockchain gives a lot of confidence. Proof of a new transaction is reflected in a “digital stone”, as Raja Rajammanar describes this. Transaction information is indisputable

because no details can be changed (Rajammanar 202, p. 79 – 80). It is also worth remembering that blockchain makes an underlying technology for cryptocurrencies, which is pointed out clearly by Rajammanar. However, cryptocurrencies are just one form among all the possible types of applications of blockchain. Blockchain is a system of record keeping, without any central authority or a single source of control. The access to it is distributed among all the participants who stand witness to every transaction. Blockchain, however, is applied in many other areas of human activities, also in other areas of business. It is a technological system that keeps digital records skipping a central entity. It is controlled by many participants (participants of this system), since these blocks are distributed to all participants who participate in the transaction (Rajammanar 2021, p. 79).

Another important explanation of what blockchain is, provides Dominika Kaczorowska-Spychalska (Kaczorowska-Spychalska 2020, p. 321), following William Mougayar and Vitalik Buterin (Mougayar, Buterin 2019, p. 46), “blockchain is a data exchange network and a transaction register used to transfer values between different entities.” Following William Mougayari Vitalik Buterin I have to agree that “Understanding blockchains is tricky. You need to understand their message before you can appreciate their potential. In addition to their technological capabilities, blockchains carry with them philosophical, cultural, and ideological underpinnings that must also be understood.” (Mougayar, Buterin 2019, p. 41). As Dominika Kaczorowska-Spychalska explains “Blockchain contains an ever-increasing number of information (records), grouped into blocks related to each other in such a way that each subsequent one has a designation of the time of creation and a link to the previous block (thus, a summary of its contents in encrypted form).” (Kaczorowska-Spychalska 2020, p. 321).

The blockchain system uses a peer-to-peer network to store data in different locations, as opposed to a centralized system. Each location that aggregates data is a so-called no-go-to that stores a copy of the data directly from its source. Each new record added to the database is immediately updated across the network. The transactions are then verified by network users and added to the existing blockchain. After verification of the blocks, you cannot edit them (Deshpande 2019, Kaczorowska-Spychalska 2020, pp. 321-333., p. 321).

More and more often I come across information and opinion that blockchain system will be a key solution in many areas and is particularly important in the age of digital transformation.

Considering blockchain solution, in my opinion it is necessary to mention also the term smart contracts, also known as crypto contracts. Following the definition of IBM “smart contracts are digital contracts stored on a blockchain that are automatically executed when predetermined terms and conditions are met. Smart contracts are simply programs stored on a blockchain that run when predetermined conditions are met. They typically are used to automate the execution of an agreement so that all participants can be immediately certain of the outcome, without any intermediary’s involvement or time loss. They can also automate a workflow, triggering the next action when conditions are met” (IBM). These terms and conditions are coded into the software, which automatically ensures their application (Rajammanar 2021, p. 81).

Following Indrajeet Deshpande, a marketing professional with over 7 years of experience who wrote about blockchain system, it is worth underlining here that: „Blockchain technology is all set to disrupt industries such as Banking, Financial Services and Insurance (BFSI), real estate, media, retail, healthcare, and legal. And that’s just to name a few! Big names such as IBM, Microsoft, Oracle, Intel, Apple have already recognized the potential and started to make inroads into blockchain.” (Deshpande 2019).

Blockchain-based solutions are already quite popular in other countries around the world, not only in the financial field, but also in marketing and art. As my research showed, these solutions are not well known in Poland what indicates that popularising blockchain applications in different areas is highly required so that Polish organizations do not lag behind.

3. BLOCKCHAIN - A KEY REVOLUTION IN MARKETING

At the beginning, I wanted to introduce the fundamental information about blockchain system, however, I am particularly interested in its applications in marketing activities. According to Indrajeet Deshpande, the areas of blockchain applications in marketing include: Influencer Marketing, Affiliate Marketing, Loyalty Programs, User Data Protection, User Rewards, Ad Fraud Prevention, Blockchain-Based Social Platforms and, Social Commerce. I would like to add another one – the provenance.

3.1. Influencer Marketing

Influencer Marketing, which is based on cooperation with celebrities, public figures and micro-influencers, has long been a part of marketing strategies. However, despite the great popularity of these activities, they face some challenges that can be solved by the means of blockchain system. These challenges include lack of clear rules in ROI tracking, problem of false followers, lack of transparency and issues with engagement in social media sphere; indaHash and Patron platforms are good examples in this context (Deshpande 2019). Thanks to blockchain, companies will be able to verify advertising and the actual reaching to followers of the influencer, then transactions will automatically be settled with influencers only after the right message will reach to the audience. This kind of transaction is carried out directly without intermediaries (Kaczorowska-Spychalska2020, p. 326-327).

3.2. Affiliate Marketing

Referring to the study of Indrajeet Deshpande, affiliate marketing may result in the loss of invested funds due to the questionable origin and nature of affiliated organizations. Brands may spend funds on websites, however, as it often turns out, just being on a website does not guarantee the expected results. In addition, brands must also pay high commissions to partners as part of these activities. According to data from Statista, about \$6.4 billion was spent in the United States alone on affiliate marketing, and yet often these resources are spent inefficiently. I would like to underline that blockchain system provides a solution can be useful also in this area (Deshpande 2019).

The use of the blockchain system within the Affiliate Marketing can contribute to:

- Savings in marketing budget through the use of cryptocurrencies and simplification of payment,
- Circumvention of withdrawal restrictions. Currently, withdrawals are suspended until the minimum payment threshold is reached, while the blockchain-based system bypasses such restrictions.
- Reduce fraud in the advertising system and ensure accountability through the use of so-called smart contracts.

As an example of solution with blockchain application within affiliate marketing and referring to Indrajeet Deshpande, I would like to point out also coupit, RefToken.io (decentralized affiliate platform) and Hoqu (marketing performance platform which helps brands, advertisers, agencies and network to create, manage, optimize, track online advertising campaigns. (Deshpande 2019).

3.3. Loyalty Programs

Loyalty programs are used by many brands, are widely known and liked by customers. However, the downside is that customers often have to follow the end dates of the program, which they often miss and as a result do not feel the final benefit which comes from a particular brand. The average U.S. household participates in about 12 loyalty programs and is assigned to an even larger number (Deshpande 2019). According to the results of the survey “The Loyalty Program Monitor” conducted in 2019 by ARC Rynek and Opinion, 59% of the surveyed Poles participated in loyalty programs. What is also significant, the percentage of Poles who use mobile applications of loyalty programs is growing year on year (ISBNews 2019).

However, customers experience problems in the context of loyalty programs and thus a sense of disappointment in the context of a particular brand, which creates a negative brand experience. The problem is to exchange points in a timely manner before the end of the program. Therefore, customers must track when a program ends in order to redeem the points before they expire. The solution to such

a challenge maybe the application of a loyalty program based on the blockchain system. Blockchain is decentralized so that multiple brands can collaborate and create a common loyalty program where customers can use common points within a single loyalty program. Examples of loyalty programs based on a system of blockchain are Loyalcoin, Sandblocki, KeyoCoin (Deshpande 2019).

3.4. User Data Protection

Blockchain also provides a solution in the context of data protection. This topic is particularly sensitive after 2018, when strict requirements for the marketing and storage of data under the GDPR were introduced. This meant very strict guidelines for brands to use their customers' data as well. Blockchain technology gives you the ability either to anonymize your data or sell your information to the brands of your choice. To invoke Indrajeet Deshpande again, I would like to give here two examples of such a solution based on the blockchain system, namely Killi and uPort. The first one gives the users permission by giving them the opportunity to sell their data, complete surveys and receive payments for it and thus earn money. The second one provides opportunity to enter data that specifies the users' identity in Ethereum and helps manage their data (Deshpande 2019). Blockchain conveys data management to consumers. They can decide which company they give their data to (Newman 2019). Thus, blockchain can give us more control over the data we leave on the Internet.

Another important tool that uses a blockchain solution to protect data on the Internet is Blockstack. It is a decentralized computing platform that is dedicated to the control of individual data and identity on the Internet. Previously, users left their data on the application server wanting to use them, and thanks to Blockstack, the user keeps their data. Blockstack acts as a key - a pass to some applications. However, the data comes back into the consumer when it stops using the app. This solution stops the process of giving away your data carelessly (Newman 2019).

In order to protect data, there are created decentralized applications, whose functionality is based on the fact that they act like cryptographically secured wallets. It is up to the owner of this wallet to decide to whom, for what purpose and at what price they make their data available. This can be personal data as well as data which are currently collected by Facebook, Google and other technology companies. A good example of such an application may be Civic, which aims to give back control and security over their digital identity to its owner. As the company states, it enables from access cryptocurrency easily to connecting with friends to making transactions that require authorization. Our technology platform creates trust with blockchain-powered identity verification, privacy-focused health status, and better peer-to-peer Bitcoin transfers" (Civic n.d.).

3.5. User Rewards

Once again, I would like to focus on the innovative role of this system. Blockchain can be used to better funds management in the online advertising system. Blockchain allows you to reach a more relevant audience and shows ads according to their interests. In this way, brands do not waste their online advertising budget on random audiences. There is a browser called Brave that allows people to choose the type of ads they're running. Brave introduced an Ethereum-based token called the Basic Attention Token (BAT). This token is used between publishers and consumers, as determined by the type of advertising. Products such as Kind Ads and Impetus are a similar solution (Deshpande 2019). The company co-operates with over 290 thousand publishers and the advertisements reaches eight million of users a month (Kaczorowska-Spychalska 2020, p. 326).

3.6. Ad Fraud Prevention / More transparency

The blockchain system provides the control of the advertisement expenses. Advertisers lose a very large part of their advertising funds to advertising fraud due to fraudulent traffic, unfair competition in the form of impersonation of someone else's domain, embezzlement and other abuse. Publishers show ads on websites that do not have the right target audience, but generate a lot of traffic, and thus do not produce the desired results for the advertiser. To prevent adverse practices, blockchain is used to bypass intermediaries. This gives you more transparency. There are already examples of anti-advertising products including Rebel AI, Lucidity and tribe OS (Deshpande 2019).

The Association of National Advertisers (ANA) conducted a study about advertising industry, which showed serious issues with ad fraud.

It also determined that 60 percent of ad budget is spent on the publisher rather than actual ad emission which results in unsuccessful campaigns.

The aim of the brand is to pay for ads which actually appear on a real site and are viewed by real person not by bots (Rajammanar 2021, p. 82-83). Market experts need trustworthy and efficient system, such as blockchain providing smart contracts with their publishers, which will show exact reactions and what exactly is happening. As a result, the brand will pay for the very performance. Many companies started focusing on the budget spent on advertisement on the Internet, for example Unilever and IBM (Newman 2019). Due to the blockchain system, a trusted and verified advertising chain is created. In the previous system, a large proportion of the ad spend (85 cents per one dollar) was paid to the publisher. Now, the situation is different. Due to the blockchain system, the value that goes to the publisher from \$ 1 for advertising to 40 cents, bypassing many intermediaries. Only Unilever saved tens of millions of dollars with this system.

In order to organize the advertising system well, two solutions were developed - AdChain and AdShares. The first one, AdChain, is an open protocol system based on the Ethereum public blockchain that was designed for the needs of the digital advertising ecosystem. The first protocol is AdChain, which is a distributed white list of verified publisher domain names (Never Stop Marketing n.d.).

The second one is AdShares - an open ecosystem for ad programmatic trade which allows any entity to offer advertisement services in a fair way. It links publishers and advertisers to make a deal in a fair way. Both advertisers and publishers may estimate the quality of the advertisements. A log that records all ad views to network participants and smart contracts prevents fraud. This system is therefore to eliminate the impressions generated by bots, so that advertisers will not have to pay for them (Adshares, n.d.).

3.7. Blockchain-Based Social Platforms

There are also blockchain-based social media platforms that give you more appeal than well-known social media platforms like Facebook and Instagram. Popular social media platforms are about an advertising system based on the acquired user data. Data of users at these platforms are the data which are information about the move of each user move on these platforms and information left by users. There already exist platforms based on blockchain system and they are Peepeth and mastodon.social (Wong 2017), however, at the moment they do not cooperate with brands (Deshpande 2019).

3.8. Social Commerce

Blockchain is also used in social commerce. Blockchain in e-commerce helps prevent fraud, allows user anonymity and supports faster transactions. Blockchain-based solutions are also being developed to ensure the authenticity of the products (Deshpande2019).

3.9. Provenance

The blockchain system helps to track the origin of the product. It proves crucial in luxury goods industry and pharmaceuticals, to avoid counterfeiting products. The journey of the product may be tracked and there were already luxury brands that placed holograms on a product to use it to prove its authenticity. It was done again by the blockchain system, which may validate the authenticity of the product. It was put into practice with the assumption it was very difficult to forge the hologram being the proof of the product authenticity. As a next step of this practice, a digital ID was attached to the product as a hologram equivalent and also the proof of authenticity. Each product would have an individual digital ID. The role of a blockchain system is to track the journey of the product from the factory to the shop. It is also applied for instance to the organic food, since the customers from their target group want to know the origin of the products (Rajammanar 2021p. 85).

This blockchain helps to verify products, i.e., their origin, place of production or breeding).

4. FOUR BENEFITS OF BLOCKCHAIN IN MARKETING

There are four benefits out of blockchain for marketing: cost reduction, better targeting, greater and better performance (efficiency) and, decentralized applications.

1. Cost reduction

Cost reduction is owing to cutting the third parties cooperation. The advertising networks take very large financial resources from brands as advertisers, so the ability to skip the display network is very beneficial for brands. Due to the smart agreements (with the application of blockchain) advertisers only pay if the terms of the transaction are fulfilled. Brands pay directly to publishers, freelancers and third-party publishers without intermediary providers.

2. Precise audience targeting

Using the blockchain system, which means decentralizing the advertising ecosystem, companies can target the right audience and connect directly with relevant publishers. In this way marketers will not lose whole resources on campaign even if part of it does not work perfectly because the advertising campaign is decentralized.

3. Increased efficiency

Blockchain allows real-time transactions and frees up special, separate documentation from the need, as both parties have access to transaction information. This also saves the time that is required to process additional documents (for example, invoices).

4. Decentralized applications and no rules

Steem, Ethereum, EOS, NEO, Tron, Cardano are blockchain platforms which give brands the opportunity to create applications and create communities. What is important is the fact that decentralized applications do not have any regulations, what allows to contact the target group directly.

Once again, I need to stress another beneficial role of blockchain for many industries, which is contributing to improving transparency and simplification of transactions (Rajammanar 2021, p. 80). Various authors have pointed out that it may be helpful in the process of supply chains for tracking all stages of delivery of products which plays a particularly vital role in food delivery. It is critical to deliver fresh products and avoid mutual claims concerning both their quality and the delivery (as food can often be sensitive to transport) in time to maintain a long period of freshness and prevent contamination. As an example of this application, I would like to mention the action of Walmart, which, as Dominika Kaczorowska-Spychalska wrote, tested a blockchain system to automatically track the delivery of food products from the manufacturer to the final destination, i.e., store shelves (Kaczorowska-Spychalska 2020, p. 323).

5. CONCLUSIONS

Summing up my first stage of the research based on individual interviews (IDI) with marketing experts from medium and large companies located in Poland, I may conclude that the Polish marketing industry is not very well aware of the potential of the blockchain system in marketing activities. However, blockchain already changes profoundly the digital marketing industry. It will bring many benefits into this business, and it will mainly contribute to the cost savings and regaining consumer confidence. When considering the benefits of blockchain in marketing, I think this technological solution becomes even more important than the benefits of artificial intelligence in the marketing industry. It will enormously influence the management system of digital marketing and I think this fact makes blockchain one of the most important technologies for marketing industry, and business in general.

In the second stage of the research, I will conduct a survey, which will be based on the on-line questionnaire and will be conducted with one hundred of respondents from the marketing industry, also from Poland, to examine the knowledge and the level of implementation of new technologies in marketing. I plan the second part of the research to examine on a bigger scale to confirm my initial

assumption of what the level of knowledge and implementation of blockchain in marketing industry is. My conclusion from the qualitative research, which I conducted on marketing experts from companies located in Poland (18 experts from medium and large companies) is that the level of knowledge about the opportunities and potential of application the blockchain system in marketing is rather low, since only 3 respondents out of eighteen knew this solution, whereas it is growingly known worldwide. I would like to stress that experts often underline that blockchain is changing the digital marketing.

I suppose that not only in Poland the blockchain system in marketing is relatively new and is not well known. My conclusion comes also from the professional experience within my current work for the marketing and technology agency which shows that many of our clients (for example in the Middle East region) are far from the high level of innovations in business processes. My research showed also that many Polish organizations need to go through digital transformation to be up to date with the global business. However, I think that the same conclusion may be applied to many countries e.g. in Europe and in the Middle East, which is supported by my experience from my current work in marketing and technological global group of agencies (Brand New Galaxy).

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