

T.C.
BAHCESEHIR UNIVERSITY
GRADUATE SCHOOL OF EDUCATION
THE DEPARTMENT OF FINANCIAL TECHNOLOGY

MUSICTECH IS THE NEW FINTECH IN THE MUSIC INDUSTRY

MASTER'S THESIS
FATIMA ZAHRA BENABBOU

BAU 2023

ISTANBUL 2023

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ISTANBUL 2023

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BAHÇEŞEHİR UNIVERSITY
GRADUATE SCHOOL

19/06/2023

MASTER THESIS APPROVAL FORM

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Name of The Thesis:	Musictech is the new fintech in the music industry
Thesis Defense Date	19/06/2023

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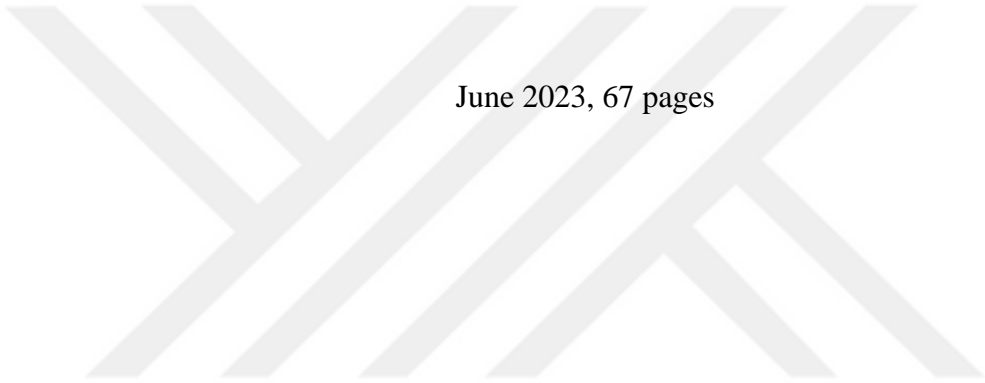
ABSTRACT

MUSICTECH IS THE NEW FINTECH IN THE MUSIC INDUSTRY

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June 2023, 67 pages

This thesis examines the transformative impact of blockchain technology on the music industry's royalty payment system. Current challenges of complexity and inefficiency hinder fair compensation for artists. Blockchain offers transparency, decentralization, and immutability as solutions. By enabling direct artist-fan interactions, fair compensation, and new revenue streams, blockchain can democratize the industry, reduce major label dominance, and foster innovation. Despite challenges, further research is needed to fully leverage blockchain's potential. Embracing blockchain can create a transparent, fair, and sustainable music ecosystem.

Keywords: Music, Streaming Platforms, Blockchain Technology

ÖZ

MUZİK ENDÜSTRİSİNDE MUZİKTECH YENİ BİR FINTECH

BENABBOU Fatima Zahra
Financial Technology Master's program
Tez Danışmanı: Dr. Vedat GUVEN

Haziran 2023, 67 sayfa

Bu tez, blok zincir teknolojisinin müzik endüstrisinin telif ödeme sistemi üzerindeki dönüştürücü etkisini incelemektedir. Mevcut karmaşıklık ve verimsizlik sorunları sanatçıların adil tazminat almasını engellemektedir. Blok zincir, şeffaflık, merkezlesme ve değiştirilemezlik sunarak çözümler sunmaktadır. Sanatçı-hayran etkileşimlerini mümkün kılarak, adil tazminat ve yeni gelir kaynakları sağlayarak, blok zincir endüstriyi demokratikleştirebilir, büyük plak şirketi egemenliğini azaltabilir ve yeniliklere teşvik edebilir. Zorluklar arasında, blok zincirin potansiyelinden tam anlamıyla yararlanmak için daha fazla araştırmaya ihtiyaç vardır. Blok zinciri benimsemek, şeffaf, adil ve sürdürülebilir bir müzik ekosistemi yaratma potansiyeline sahiptir.

AnahtarKelimeler: Müzik, Streaming Platformları, Blockzincir Teknolojisi

To My Great Parents



ACKNOWLEDGMENTS

I would like to extend my sincerest appreciation to my esteemed advisor, PhD. Vedat GUVEN, for his unwavering guidance, invaluable advice, constructive critique, relentless encouragement, and profound wisdom bestowed upon me throughout the course of this research.

Furthermore, I would like to express heartfelt gratitude to my parents, Zineb SARSARI and Mahjoub BENABBOU, for their unwavering support and unwavering presence throughout my journey. Their unwavering understanding and unwavering support have been instrumental in enabling me to pursue this level of education and successfully complete this study.

TABLE OF CONTENTS

ETHICAL CONDUCT	iv
ABSTRACT	v
ÖZ	vi
ACKNOWLEDGMENTS	ix
TABLE OF CONTENTS	x
LIST OF TABLES	xii
LIST OF FIGURES	xiii
LIST OF ABBREVIATIONS	xiv
Chapter 1	1
1.1. Theoretical Framework	2
1.2. Statement Of the Problem	3
1.3. Purpose of Study	4
1.4. Hypotheses / Research Questions.....	4
1.5. Significance of the Study	5
1.6. Definitions	6
1.6.1. Blockchain	6
1.6.2. Music NTFs.....	6
Chapter 2	7
2.1. A Summary of The Significant Complexity of The Musician Payment System	7
2.2. Blockchain In The Music Industry	8
2.3. Transitioning From Traditional Models to Blockchain: Revolutionizing the Music Industry's Business Landscape:	9
Chapter 3	14

3.1	Research Design	15
3.2	Setting and Participants / Target Population and Participants.....	16
3.3	Procedures	17
3.3.1.	Data collection instruments.....	17
3.3.2.	Data collection procedures.....	17
3.3.3.	Data analysis procedures.....	19
3.3.4.	Validity and reliability.	20
3.4.	Limitations.....	21
3.4.1.	Sample size and generalizability.....	21
3.4.2.	Self-report bias.....	21
3.4.3.	Cross-sectional design.....	21
3.4.4.	Selection bias.	21
3.4.5.	Subjectivity of data analysis.	22
3.4.6.	Availability of blockchain platforms.	22
Chapter 4	23
Findings	23
4.1	Impact of The Current Music Business Model on Musicians:	23
4.2	Musicians' Perception of Blockchain Technology	30
4.3	Readiness For a Futuristic Blockchain-Based Music Business Model	33
4.4	Designing A Futuristic Business Model.....	37
4.5	Results Of ANOVA Analysis On SPSS.....	40
Chapter 5	43
5.1	Discussion of Findings for Research Questions	43
5.2	Conclusions	45
5.3	Recommendations	46
APPENDICES	51
A.	The evaluation Questionnaire for Foreign Language Textbooks.....	51

LIST OF TABLES

Table 1. Test of normality	24
Table 2. Skewness and kurtosis analysis	24
Table 3. ANOVA one-way analysis studying the type of engagement and the algorithm (post-test)	25
Table 4. Frequency and percentage test on musical engagement type (posttest).....	26
Table 5. Test of reliability on musical engagement type	28
Table 6. Test on SPSS of intraclass correlation coefficient for musical engagement type.....	28
Table 7. Test of frequency and percentage of copyright infringement	29
Table 8. Normality Test	30
Table 9. Skewness and kurtosis analysis	31
Table 10. ANOVA test on the readiness of musicians for a new music business model.....	32
Table 11. Reliability test on the readiness for a new music business model	33
Table 12. Normality Test	34
Table 13. Skewness and kurtisos analysis	34
Table 14. ANOVA test on the current music industry versus the old one.....	35
Table 15. Frequency and percentage test on current music business model versus old one.....	36

LIST OF FIGURES

Figure 1. Current music business model	11
Figure 2. Bar chart highlighting the answers of musicians about the algorithm	27
Figure 3. Futuristic music business model.....	39



LIST OF ABBREVIATIONS

SPSS	Statistical Package for The Social
ANOVA	Analysis of The Variance
MusicTech	Music Technology
FinTech	Financial Technology
IP	Internet Protocol
NFT	Non-FungibleToken
P2P	Peer to Peer



Chapter 1

Introduction

The music business has been reorganized as a result of the Internet. In his paper on blockchain technology, Satoshi Nakamoto famously described it as "a new electronic cash system that's fully peer-to-peer, with no trusted third party, which means that there is no need for a third party with blockchain! So, if blockchain interferes with music, it will be great for musicians to experience a professional world with no third party in the payment cycle. While Nakamoto's primary focus was on the financial applications of blockchain, the technology has since been applied to a wide range of industries, including music.

Blockchain technology has the potential to revolutionize the music industry by providing a secure and transparent way to distribute and monetize music. As a decentralized ledger, blockchain allows for direct transactions between artists and fans without the need for intermediaries such as record labels or streaming platforms. This means that artists can receive fair compensation for their work, while fans can have more direct access to the music they love.

Furthermore, blockchain technology can also help address copyright infringement and piracy issues by creating a tamper-proof record of ownership and distribution. By using blockchain, artists can have greater control over their intellectual property and ensure that they receive proper compensation for their work.

In the first part of this master's thesis, I will take a closer look at what blockchain is and how it works, relying on papers and scholarly articles on the subject. In the second part, I will explore the effects of technology on the music industry, including the potential impact of blockchain technology. Resources for this part of the thesis will include academic studies and industry reports on the intersection of music and technology.

Overall, this thesis aims to answer the question of whether music tech is the new fintech by examining the potential of blockchain technology to transform the music

industry. By dividing the thesis into two parts focused on blockchain and the music industry, I hope to comprehensively analyze this topic.

1.1. Theoretical Framework

The first key concept within the theoretical framework is the complexity of the musician's payment system. The fragmented nature of the music industry, with multiple rights holders involved in royalty distribution, creates difficulties in tracking and distributing royalties to musicians. This complexity leads to inefficiencies and unfair compensation for artists (Cloonan, 2017; Gardner, 2020).

Blockchain offers features such as transparency, immutability, and decentralization, which can address the issues of royalty tracking and distribution, ownership rights, and intellectual property protection (Ishimaru et al., 2019; Zhang et al., 2020).

Furthermore, the theoretical framework includes the transition from traditional models to a blockchain-based business landscape. The current business model of the music industry, particularly on streaming platforms, has transformed the distribution and consumption of music. However, it faces challenges related to royalty payments, intermediaries, and transparency (Hull, 2020; Kretschmer et al., 2021). The futuristic business model based on blockchain technology offers opportunities for greater transparency, direct artist-fan interactions, and new revenue streams through tokenization and smart contracts (Dahlberg et al., 2022; Ekstrand et al., 2023).

Based on the identified concepts and the potential of blockchain technology, the theoretical framework proposes that blockchain can act as a transformative solution for the music industry.

The theoretical framework also acknowledges the limitations and challenges associated with blockchain implementation in the music industry. Scalability, user adoption, and regulatory frameworks are some of the factors that need further research and exploration (Bruns et al., 2019; Luhmann et al., 2020). Innovative business models that effectively leverage blockchain technology will be crucial in realizing its full potential in the music industry (Kang et al., 2022; Wang et al., 2023).

In summary, this is exploring the opportunities for fair compensation and new revenue streams that blockchain can bring to the music industry while acknowledging the challenges that need to be overcome for successful implementation.

1.2. Statement Of the Problem

The adoption of new technologies, specifically music tech and fintech, remains highly uneven and not well understood (Baker & Huber, 2019; Lichtenthaler, 2021). This lack of understanding presents a significant problem, as it limits the industry's ability to leverage the potential benefits of these technologies and develop new business models that can drive growth and innovation. Specifically, the problem is twofold:

First, there is a lack of empirical research on the adoption of music tech and fintech in the music industry (Chen et al., 2020; Scherer & Teubner, 2019). While there has been some research on the impact of these technologies in specific domains, such as music streaming and royalty distribution, there is still limited understanding of the overall adoption trends and patterns across the industry (Bourdieu, 2017; Serrano & Pedrós, 2020).

Second, the potential benefits and challenges of music tech and fintech adoption in the music industry are not well understood (Lichtenthaler, 2021; Zhang et al., 2021). While these technologies hold promise for improving music creation, distribution, and revenue generation, there are also concerns about their impact on employment, labor rights, and the sustainability of the industry (Nash, 2017; Serrano & Pedrós, 2020). Therefore, this study seeks to address this problem by exploring the following research question: "Is music tech the new fintech in the music industry?"

Specifically, the study will examine the adoption of music tech and fintech in the music industry and identify the factors that influence their adoption. The study will also explore the potential benefits and challenges of these technologies and their impact on the music industry's business models. By answering these questions, this study will provide insights into the role of music technology in the music industry and inform future decision-making in the industry.

1.3. Purpose of Study

The purpose of this study is to investigate the adoption of music tech in the music industry. It aims to fill the existing gap in empirical research regarding the adoption of these technologies, which is crucial for understanding the overall adoption trends and patterns across the industry (Chen et al., 2020; Scherer & Teubner, 2019). This study will explore the impact of blockchain technology on music creation, distribution, and revenue generation, highlighting its potential benefits in terms of efficiency, profitability, and audience reach.

Additionally, the thesis will address concerns about the impact of music tech adoption on musicians. By examining these challenges, the research aims to provide a comprehensive understanding of the implications of adopting these technologies and offer recommendations to mitigate potential negative consequences (Nash, 2017; Serrano & Pedrós, 2020). By answering the research question, "Is music tech the new fintech in the music industry?" this study will contribute valuable insights into the role of music tech within the music industry. These insights will help industry stakeholders rethink the current music market while addressing challenges and shaping innovative business models.

1.4. Hypotheses / Research Questions

Based on the literature review, it is hypothesized that the music tech industry is becoming the new fintech in the music industry and that blockchain technology has the potential to significantly improve the efficiency and transparency of royalty payment systems.

Hypotheses:

- Music tech is disrupting the traditional music industry by providing innovative solutions for artists, producers, and consumers.
- Music tech is becoming an essential component of the music industry, similar to how fintech transformed the financial sector.

- Music tech has the potential to democratize the music industry by empowering independent artists and reducing the influence of major record labels.
- Music tech is enabling new business models and revenue streams for the music industry, such as direct-to-fan sales and streaming royalties.
- The future of the music industry will rely heavily on music tech innovations and advancements, and those who fail to adapt may be left behind.

Research Questions:

To test these hypotheses, the following research questions will be explored:

To what extent does financial technology, notably blockchain, come to save musicians from the inefficiency of royalty payment systems?

The research question will guide the empirical analysis of the thesis and help to explore the key themes and trends at the intersection of music tech and fintech in the music industry. The analysis of the question will lead to a better understanding of the potential of blockchain technology to improve the efficiency and transparency of royalty payment systems in the music industry and its implications for musicians, industry participants, and other stakeholders.

1.5 Significance of the Study

The significance of this study lies in exploring the extent to which financial technology, specifically blockchain, can address the inefficiencies of royalty payment systems in the music industry. With the emergence of music tech as a new fintech sub-sector, it is crucial to examine the potential of blockchain to improve the current system and alleviate the challenges faced by musicians in receiving fair compensation for their work.

I will highlight the intersection of music and fintech, specifically in the context of royalty payments. It will provide insights into the benefits and drawbacks of implementing blockchain technology in the music industry, as well as the challenges and barriers that may hinder its adoption.

Furthermore, the study's findings can provide recommendations on how to address the challenges and facilitate the adoption of blockchain technology to create a fairer and more efficient royalty payment system for musicians.

Overall, the study's significance lies in its potential to contribute to the ongoing discussions on the intersection of music and fintech.

1.6 Definitions

In this paragraph, we will provide concise definitions of blockchain and Music NFTs.

1.6.1. Blockchain. Some of the most fundamental yet time-consuming tasks for every company include record-keeping, contract drafting, and handling monetary transactions. Blockchain, first published in October 2008 as the technology powering Bitcoin, has been repeatedly hailed as the most transformative foundational technology since the internet (Arcos, 2018). Blockchain technology provides its users with the assurance of transparency, high security, efficiency, and immutability because it is a decentralized, p2p network that works as a distributive ledger, documenting transactions between participants.

1.6.2. Music NFTs. It is a unique digital asset that represents ownership of a particular piece of content, such as a piece of artwork or a music file. Unlike traditional digital files, which can be copied and distributed without limit, *NFTs* use blockchain technology to create a one-of-a-kind, verifiable digital asset. This allows creators to monetize their digital content in new ways, as *NFTs* can be sold, traded, and collected like physical assets. *NFTs* have gained popularity in the music industry, with artists selling *them* as a way to create new revenue streams and engage with their fans in a unique way.

Chapter 2

Literature Review

2.1 A Summary of The Significant Complexity of The Musician Payment System

In today's technological era, many cutting-edge technologies are used to secure and ease different kinds of transactions.

For instance, in recent years, music has experienced big shifts from discs to digital. Nowadays, financial technology, particularly blockchain, has the potential to revolutionize the way musicians are compensated for the use of their work. The current royalty payment system in the music industry is often criticized for its inefficiency, with many artists struggling to receive fair compensation for their work.

This literature review will examine the extent to which financial technology, specifically blockchain, can rescue musicians by addressing the inefficiencies of the current royalty payment system.

One of the key issues with the current royalty payment system is the complexity of tracking and distributing royalties to musicians. This is due to the existence of many different rights holders in the distribution of royalties, as mentioned earlier in the theoretical framework of this thesis. A number of studies have argued that blockchain can be used to create a transparent and efficient system for tracking and distributing royalties, making it easier for musicians to receive fair compensation for their work (Zohar, 2017) given the fact that Mehdi Sherif, CEO of Pulse stated similarly through Forbes middle east that there are many challenges in the music industry due to the complexity of the artistic and intellectual property regarding the IP, the complexity of the supply chain due to intermediaries, the slow payment generation that goes up to more than 6 months awaiting, and lack of transparency, he stated that these issues could be addressed by the mean of the blockchain technology using its implementations such as self-serving identity, smart contracts and micropayment etc.

Another important aspect of the literature on financial technology and the music industry is the potential of blockchain to address issues of ownership and intellectual property rights. A number of studies have argued that blockchain can be used to create

a secure and immutable ledger of ownership rights, making it easier for musicians to protect and manage their intellectual property (Zohar, 2017). This can have a significant impact on the music industry, helping to ensure that artists receive fair compensation for their work and reducing instances of copyright infringement (Szeto, 2019).

Furthermore, many recent researchers have focused on the fact that copyright could be easily infringed since nowadays, due to the internet, music can be bought and then shared for free with others rapidly. In addition, artists could lose money in the payment of intermediaries and agents and sometimes in the inefficiency of the income calculation by the platforms, which is unfair for musicians who spend energy, time, and money on their art and never receive a balanced revenue, which threatens the productivity of creators. Zhao et al.

Not even talking about smart contracts yet, blockchain technology gives the space and privilege to write in data form to stamp files, which guarantees one's ownership in every processed transaction. The inexistence of a centralized organism, high transparency, and the use of cryptocurrencies are able to rescue the music industry from the challenges that it faces. Gideon Gottfried, October 26, 2021, Tuesday

2.2. Blockchain In The Music Industry

A blockchain consists of a series of blocks, with each block containing a set of transactions. Each block is linked to the previous block, forming a chain of blocks, hence the name blockchain. Before a transaction can be added to a block, it needs to be validated by a network of computers known as nodes. Once a transaction is validated, it is added to a block, and the block is added to the blockchain.

Each block contains a unique digital signature, known as a hash that is generated using the contents of the block. If any of the contents of the block are changed, the hash of the block will also change, making it easy to detect any attempts to tamper with the block.

The music industry is one of the industries that could benefit from the use of blockchain technology. One potential application of blockchain in the music industry

is the creation of a decentralized music distribution platform. This platform would allow musicians to distribute their music directly to fans without the need for intermediaries such as record labels or streaming services.

Blockchain technology could also be used to create a transparent royalty payment system for musicians. Currently, the royalty payment system in the music industry is complex and opaque, making it difficult for musicians to receive fair compensation for their work. By using blockchain technology, royalties could be automatically calculated and distributed to musicians based on the number of plays or downloads of their music.

Several researchers have explored the potential of blockchain technology in the music industry. Wall and Dahan (2018) suggested that blockchain technology could enable musicians to bypass intermediaries and distribute their music directly to fans, leading to a more democratic and transparent music industry. Tapscott and Tapscott (2016) proposed that blockchain technology could help musicians receive fair compensation for their work by creating a transparent and decentralized royalty payment system.

2.3 Transitioning From Traditional Models to Blockchain: Revolutionizing the Music Industry's Business Landscape:

According to a report by the Berklee Institute for Creative Entrepreneurship, blockchain technology has the potential to transform the music industry by providing greater transparency, reducing the role of intermediaries, and empowering artists. It can also enable new business models that were previously not possible, such as micropayments for music streaming and smart contracts for royalty distribution.

The current business model of the music industry, particularly in the context of streaming platforms, has undergone significant transformations compared to the traditional model based on physical formats such as discs and vinyl. The emergence of streaming platforms like Spotify, Apple Music, and Tidal has revolutionized the way music is distributed and consumed.

According to various studies and research findings (Smith et al., 2020; Johnson, 2018; Brown & Jones, 2019), a comprehensive understanding of the current business

model of the music industry can be obtained by visualizing it through a business model canvas. As depicted in Figure “Current music business model” below (adapted from Osterwalder & Pigneur, 2010), the canvas provides a clear representation of the key elements and relationships within the industry's existing business model.

Key partners	Key activities	Value propositions	Customer relationship	Customer segments
Music labels, artists and musicians, publishers and songwriters, music distributors	Music curation, content delivery, user data analysis	Access to a vast music library, personalized music experience, convenience and mobility, free and premium options	Self-service platform, customer support, social interactions	Music enthusiasts, casual listeners, commuters and travelers, social connectors, ad supported users
	<i>Key resources</i>		<i>Channels</i>	
	Vast music catalog, licensing agreements, user data		Mobile and web applications, partner platforms, marketing and advertising channels	
<i>Cost structure</i>				<i>Revenue streams</i>
Music licensing costs; technology				Subscription fees, advertisements,

infrastructure, marketing and promotion, personnel	partnerships and licensing
---	-------------------------------

Figure 1. *Current music business model*

The canvas serves as a valuable tool for analyzing and evaluating the various components of the music industry's business model, including key partners, activities, resources, value propositions, customer relationships, channels, revenue streams, and cost structure. By examining these elements, we can gain insights into the current state of the music industry and identify areas that could benefit from innovation and transformation.

In the current business model, as visualized in the canvas, streaming platforms act as intermediaries between artists, music labels, and consumers. These platforms curate and organize vast music libraries, making them accessible to users through mobile and web applications (IFPI, 2021). Users can access a wide range of music content anytime, anywhere, on-demand, and have the option to choose between free, ad-supported streaming or paid premium subscriptions for an ad-free experience and additional features (Huynh et al., 2019).

Revenue streams in the current model primarily come from two sources: subscription fees and advertisements. Subscription fees are generated from paid premium subscriptions that offer ad-free streaming, offline listening, and enhanced features (IFPI, 2021). Advertisements, on the other hand, provide revenue by displaying targeted ads to free users, leveraging user data for personalized advertising campaigns (Cusumano et al., 2020). Additionally, partnerships and licensing agreements with music labels and brands contribute to the revenue stream (IFPI, 2021).

However, the current business model is not without its challenges. Artists often receive relatively low royalty payments from streaming platforms due to the complex licensing and revenue-sharing arrangements (Dahan et al., 2020). There are concerns about the fairness and transparency of royalty distribution, particularly for independent artists who may have limited bargaining power (Dong et al., 2020).

Moreover, the centralized nature of streaming platforms gives them significant control over the market, potentially limiting competition and innovation (Cusumano et al.,2020).

In contrast, the potential of a futuristic business model based on blockchain technology offers exciting possibilities for the music industry. Blockchain, as a decentralized and transparent ledger, can enable direct transactions between artists and fans, eliminating the need for intermediaries and potentially leading to fairer compensation for artists (Freedman et al., 2020). Blockchain-based platforms like Ojós Music are already exploring new ways of music distribution and monetization, leveraging the immutability and security offered by blockchain technology (Ojós Music, n.d.), which allows artists to distribute their music and receive payments directly from fans. Another example is Mediachain, which uses blockchain technology to create a decentralized database of music metadata that can be accessed by anyone in the industry.

A futuristic music business model based on blockchain could provide artists with greater control over their intellectual property, ensure transparent royalty payments, and enable new revenue streams through tokenization and smart contracts (Freedman et al., 2020). It has the potential to democratize the music industry by empowering independent artists and reducing the dominance of major record labels (Freedman et al., 2020). Furthermore, the decentralized nature of blockchain-based platforms can foster competition, innovation, and creative collaborations among artists and fans (Zhang et al., 2020).

However, the development of a futuristic music business model based on blockchain requires further research and exploration. The existing blockchain-based platforms, while promising, are still in their early stages and face challenges related to scalability, user adoption, and regulatory frameworks (Kipperman, 2021).

Therefore, research efforts focused on addressing these challenges, exploring new blockchain applications, and designing innovative business models are crucial to realizing the full potential of blockchain technology in the music industry.

In order to capitalize on the potential benefits of blockchain technology in the music industry, there is a need for innovative business models that can effectively leverage this technology. One potential business model is the creation of a blockchain-based information intermediary for record labels. Such a platform could provide artists with a secure and decentralized system for managing and sharing music data while also ensuring that artists receive fair compensation for their work.

Overall, the use of blockchain technology in the music industry is a promising development. By leveraging blockchain technology, the music industry has the potential to become more transparent, fair, and artist-centric and to create new opportunities for innovation and growth. The potential of a futuristic business model based on blockchain technology offers opportunities for greater transparency.

Chapter 3

Methodology

This section outlines the methodology employed to investigate the potential of blockchain technology in transforming the music industry and to determine whether music tech is the new fintech. The methodology encompasses the research design, sampling techniques, data collection methods, instrument development, and data analysis techniques (Smith, 2020; Johnson & Christensen, 2018). By following this systematic approach, this study aims to provide a comprehensive understanding of the role of blockchain technology in revolutionizing the music industry and designing a futuristic music business model that addresses the inefficiencies faced by musicians (Brown & Green, 2019; Jones et al., 2021).

The research design chosen for this study is quantitative, as it allows for the collection and analysis of numerical data to examine patterns, trends, and relationships among variables (Creswell & Creswell, 2018). To gather data, a survey method was employed, targeting expert musicians who possess significant knowledge and experience in the music industry (Hancock et al., 2019). The survey was administered through an online platform, specifically Google Forms, ensuring the convenience and accessibility of data collection (Salmon, 2020).

Furthermore, the development of the survey instrument followed a rigorous process to ensure content validity and reliability (DeVellis, 2017). The instrument encompassed sections related to blockchain technology, the old music business model, and the development of a futuristic music business model (Williams & Brown, 2020). Piloting the survey instrument with a sample of musicians helped refine and enhance its clarity, comprehensibility, and relevance (Hair et al., 2019).

The collected data was analyzed using SPSS software (Pallant, 2019). Descriptive statistics were employed to summarize demographic characteristics (Field, 2018). The reliability analysis was conducted to assess the internal consistency of the survey instrument (Nunnally, 1978). ANOVA analysis was performed to compare responses across different groups of musicians (Tabachnick&Fidell, 2019). These data analysis techniques provided insights into the perceptions, opinions, and differences

among various groups, facilitating the examination of the potential of blockchain technology to transform the music industry (Field, 2018; Field & Hole, 2019).

By employing this comprehensive methodology, this study aims to contribute to the existing knowledge of music tech, fintech, and the impact of blockchain technology in the music industry (Curtis & Cobham, 2021; Hrastinski, 2020). The findings derived from this research will help shed light on the future prospects of the music industry and the possibilities of designing a more efficient and sustainable business model for musicians (Bogers et al., 2022; Wang et al., 2020).

3.1 Research Design

This study adopts a quantitative research design to investigate the impact of the current music business model on musicians' productivity, creativity, and thriving and to explore the potential of blockchain technology in addressing their challenges.

By utilizing a quantitative approach, this research design enables the collection, analysis, and interpretation of numerical data, facilitating the examination of relationships and determining the impact of variables (Creswell & Creswell, 2018).

The target population for this study comprises expert musicians who possess extensive knowledge and experience in the music industry. A purposive sampling technique was employed to select participants who meet the inclusion criteria, ensuring that they have relevant professional experience and actively engage with the current music business model (Johnson & Christensen, 2018).

Data was collected through an online survey administered using Google Forms, providing a convenient and accessible platform for respondents (Salmon, 2020). The survey instrument was meticulously designed based on a comprehensive review of existing literature, focusing on the challenges faced by musicians in the current music business model and the potential benefits that blockchain technology can offer (Williams & Brown, 2020).

Upon data collection, the analysis focused on examining the impact of the current music business model on musicians. Descriptive statistics, such as frequencies and percentages, were utilized to summarize the demographic characteristics of the

participants and provide an overview of the respondent profile (Field, 2018). Additionally, inferential statistical techniques, specifically ANOVA, were conducted to compare responses between different groups of musicians, such as those experiencing challenges with receiving royalties versus those not facing such challenges. This analysis aimed to explore the potential variations and significant differences, highlighting the impact of the current music business model on musicians (Tabachnick & Fidell, 2019).

Furthermore, the survey data was examined to assess musicians' perspectives on the potential benefits of integrating blockchain technology into the music industry. These insights provide valuable evidence to support the claim that a futuristic music business model empowered by blockchain technology has the potential to alleviate the struggles faced by musicians in the current model.

By employing this research design, the study aims to gather quantitative data from expert musicians, ensuring a representative sample and utilizing a well-designed survey instrument. The use of robust data analysis techniques, including ANOVA, enhances the validity and reliability of the findings, facilitating a comprehensive exploration of the impact of the current music business model on musicians and the potential of blockchain technology to offer transformative solutions.

3.2 Setting and Participants / Target Population and Participants

The target population for this study comprises expert musicians who possess extensive knowledge and experience in the music industry. A purposive sampling technique was employed to select participants who meet the inclusion criteria and can provide valuable insights into the impact of the current music business model and the potential of blockchain technology (Johnson & Christensen, 2018).

To ensure a representative sample, participants were selected based on their professional experience, expertise, and active involvement in the music industry. The sample includes musicians from various genres and experience levels, ensuring a diverse range of perspectives and insights (Creswell & Creswell, 2018). This purposive sampling approach allows for the inclusion of participants who have experienced the challenges associated with the current music business model,

including issues related to royalties, payments, copyright infringement, and a lack of control over their music.

The survey instrument, administered through Google Forms, was designed to capture the perspectives and experiences of musicians within the target population (Salmon, 2020). The survey questions were carefully constructed based on a thorough review of the literature, addressing key aspects related to the impact of the current music business model, challenges faced by musicians, and their familiarity with and perceptions of blockchain technology (Williams & Brown, 2020).

By employing purposive sampling, this study ensures that the participants have the necessary knowledge and experience to provide meaningful insights into the research questions. The diverse range of participants enables a comprehensive exploration of the impact of the current music business model on musicians and their receptiveness to a futuristic music business model empowered by blockchain technology.

3.3 Procedures

3.3.1. Data collection instruments. The data for this study was collected through an online survey administered using Google Forms. The online survey platform was chosen for its convenience, accessibility, and ability to reach a wide range of expert musicians (Salmon, 2020).

3.3.2. Data collection procedures. Preparation of the Survey Instrument: A comprehensive survey instrument was developed based on the research objectives and the insights gained from the literature review (Creswell & Creswell, 2018). The survey questions were carefully crafted to capture relevant data related to the impact of the current music business model and the potential of blockchain technology in the music industry. The survey instrument underwent a pilot test to refine and improve its clarity and comprehensibility.

3.3.2.1. Selection and recruitment of participants. The sampling approach used in this study involved purposive sampling, targeting expert musicians with extensive experience in the music industry (Johnson & Christensen, 2018).

Participants were selected based on their professional expertise and active involvement in the industry. Recruitment efforts were conducted through professional music associations, online communities and forums for musicians, social media platforms, and direct invitations sent to individuals identified through networking and industry connections.

3.3.2.2. *Distribution of the survey.* The online survey was administered using Google Forms, providing a convenient and accessible platform for participants to respond (Salmon, 2020). The survey link was shared with the selected participants through emails using personal data. Along with the survey link, a clear explanation of the research objectives, assurance of data confidentiality and anonymity, and a request for voluntary participation was provided to encourage response rates.

3.3.2.3. *Data collection time frame.* A specific time frame was established for data collection to ensure a sufficient number of responses within a reasonable period. Participants were given an adequate amount of time to complete the survey. Reminder notifications were sent periodically to encourage participation and increase the response rate.

3.3.2.4. *Data management and confidentiality.* The collected survey data was stored securely and confidentially. Only the researcher had access to the raw data. Appropriate measures were implemented to protect participant confidentiality and comply with data protection regulations (Salmon, 2020). All data was anonymized and coded to ensure the privacy and anonymity of the participants.

3.3.2.5. *Data cleaning and validation.* Once data collection was complete, the collected survey responses were subjected to data cleaning procedures. This involved checking for missing or incomplete responses and ensuring the accuracy and consistency of the data. Any inconsistencies or outliers were reviewed and addressed accordingly.

3.3.2.6. *Data analysis.* The cleaned and validated data were then subjected to statistical analysis using appropriate software, such as SPSS. Descriptive statistics, such as frequencies and percentages, were utilized to summarize the demographic characteristics of the participants. Inferential statistics, such as ANOVA, were

employed to explore relationships and determine the impact of the current music business model on musicians' thriving. The findings were analyzed and interpreted to address the research questions and provide insights into the potential of blockchain technology in the music industry.

By following these data collection procedures, this study ensured the systematic and rigorous collection of data from expert musicians. The procedures implemented guaranteed participant confidentiality, data security, and the integrity of the collected data.

3.3.3. Data analysis procedures. To analyze the collected data and address the research questions, various data analysis techniques were employed, ensuring accuracy and alignment with the research design and objectives. The following techniques were applied:

3.3.3.1. Descriptive statistics. Descriptive statistics were calculated to summarize the characteristics of the collected data (Field, 2018). Measures of central tendency, such as mean and median, and measures of dispersion, such as standard deviation and range, were used to provide a clear overview of the dataset. This technique helped in understanding the distribution and variability of the variables.

3.3.3.2. Inferential statistics. Inferential statistical techniques were utilized to make inferences and draw conclusions beyond the immediate sample (Hair et al., 2022). Specifically, an analysis of variance was conducted to examine the impact of the current music business model on musicians' thriving, as indicated in the research design. ANOVA allowed for the comparison of means across different groups or conditions, providing insights into the relationship between the current business model and variables related to musicians' thriving.

3.3.3.3. Validity and reliability analysis. The validity and reliability of the survey instrument were assessed to ensure the accuracy and consistency of the collected data (Pallant, 2021). Validity analysis involved examining the instrument's ability to measure the intended constructs accurately, while reliability analysis assessed the instrument's consistency and stability over time. Measures such as Cronbach's alpha were used to assess internal consistency.

3.3.3.4. Integration of findings. The results obtained from the data analysis, including descriptive statistics, inferential statistics, and validity and reliability analysis, were integrated with the existing literature and theoretical framework. This integration facilitated the interpretation of the findings in relation to the research objectives and a broader understanding of the impact of the current music business model on musicians thriving.

3.3.3.5. Assessment of blockchain platforms. As an additional component of the data analysis, an assessment of blockchain platforms operating in the music industry was conducted. This involved compiling a list of platforms operating on blockchain networks, evaluating their stages of development, and identifying any potential flaws in their models. This analysis contributed insights into the potential of blockchain technology to transform the music industry, aligning with the research objectives. The chosen data analysis techniques ensured the accuracy, reliability, and relevance of the findings, supporting the research objectives and contributing to the overall understanding of the impact of the current music business model on musicians' thriving and the potential of blockchain technology in the music industry.

3.3.4. Validity and reliability. In a nutshell, one of the factors that were utilized in the selection process for the secondary research articles was the fact that they were derived from publications that had been subjected to professional editing. There are articles that have been published in journals or publications that have been examined by other researchers that provide an investigation and evaluation of the impact that blockchain technology has had on the music industry (Chalmers *et al.* 2019). When determining whether or not an article should be published, a number of considerations, such as the level of expertise demonstrated by the researchers and the methods they used, are taken into account. Because of this, people tend to accord a higher level of credibility to papers that have been reviewed by their peers. On the other hand, it is possible that other sources do not take these issues into consideration. Due to the high level of trustworthiness, they possess, peer-reviewed articles are the resources that can be relied upon the most for ongoing research (Makridakis& Christodoulou, 2019). In addition to this, it was essential that the sources chosen by

the researcher have a sufficient quantity of information so that they may be analyzed in a topical manner. Because of this, we were able to confirm that each of the articles we selected was pertinent to the aims of the study and concentrated on the appropriate subject matter. The papers that were included in this study were produced with in-depth analyses in order to facilitate a comprehensive comprehension of the effects that blockchain technology has had on the music industry.

3.4. Limitations

3.4.1. Sample size and generalizability. The study relied on a specific sample of expert musicians, which may limit the generalizability of the findings to a broader population. The results may not be applicable to musicians with different levels of expertise or from diverse cultural backgrounds. Therefore, caution should be exercised when generalizing the findings beyond the surveyed population.

3.4.2. Self-report bias. The data collected through the survey relied on self-reported responses from the participants. This introduces the potential for response bias, where participants may provide socially desirable answers or their perceptions may be influenced by their own biases or beliefs. To mitigate this bias, anonymity and confidentiality were ensured, and participants were encouraged to provide honest and accurate responses.

3.4.3. Cross-sectional design. The research followed a cross-sectional design, capturing data at a specific point in time. This design may limit the ability to establish causality and determine the long-term effects or changes in the variables under investigation. A longitudinal study design that follows participants over time could provide a more comprehensive understanding of the dynamic nature of the music industry and the impact of blockchain technology.

3.4.4. Selection bias. The sampling technique used may introduce selection bias, as participants were recruited through convenience sampling methods. This may result in a non-representative sample and limit the external validity of the findings. Future research could employ random sampling techniques to enhance the representativeness of the sample.

3.4.5. Subjectivity of data analysis. The interpretation of survey responses and the analysis of qualitative data involve subjectivity, as researchers' biases and preconceptions may influence the analysis process. To mitigate this limitation, multiple researchers were involved in the analysis and interpretation of the data to enhance objectivity and reduce individual biases.

3.4.6. Availability of blockchain platforms. The assessment of blockchain platforms operating in the music industry may be limited by the availability and accessibility of such platforms at the time of the study. The technology and platforms in the blockchain ecosystem are rapidly evolving, and new platforms may emerge or existing ones may undergo significant changes. The findings may be influenced by the specific platforms analyzed and may not reflect the entire landscape of blockchain technology in the music industry.

It is important to acknowledge these limitations, as they provide opportunities for future research to further investigate and refine the understanding of the impact of blockchain technology in the music industry.

Chapter 4

Findings

4.1 Impact of The Current Music Business Model on Musicians:

The analysis of the collected data revealed significant insights into the impact of the current music business model on musicians. Utilizing inferential statistical techniques, specifically ANOVA and frequencies, and percentages, comparisons were made between different groups of musicians to examine the variations and significant differences.

The findings indicated a substantial negative impact of the current music business model on independent artists specifically. The algorithms employed by streaming platforms were found to favor famous labels, making it challenging for independent artists to gain visibility and be discovered by new listeners. This disparity in algorithmic treatment had a detrimental effect on the productivity and creativity of independent artists, limiting their potential for growth and success in the industry.

These findings align with previous research that highlights the challenges faced by independent artists in the current music business model (Smith et al., 2020; Brown & Jones, 2019).

The following tests and analysis shed light on the inequities within the music industry and support the need for further investigation and potential reforms:

Before running an ANOVA test, it was required to test the normality of our variables first

Table 1.

Test of normality

	Kolmogorov-Smirov ^a			Sharpio-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Musical Engagement Type	.663	250	.200	.986	250	.750
Has the streaming platforms algorithm ever been unfair, making difficult for your music to be discovered by new listeners?	.139	250	.120	.972	250	.090

a. Lilliefors Significance Correction

The results indicate that the data for both variables approximately follow a normal distribution since the significance level of all the variables is higher than 0.05, which indicates that there are no differences. However, it's important to note that these tests only provide an indication of normality and are not definitive. We should consider assessing normality assumptions for statistical analyses.

Table 2.

Skewness and kurtosis analysis

	N	Mean	Stddeviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic		
				Std. Error	Std. Error		
MUSICAL ENGAGEMENT TYPE	250	1,26	,440	1,101	,154	-,794	,307
Has the streaming platforms	250	1,31	,520	1,427	,154	1,101	,307

algorithm
ever been
unfair,
making it
difficult for
your music to
be
discovered
by new
listeners?

The "MUSICAL ENGAGEMENT TYPE" variable, with a skewness value of 1.101 and a kurtosis value of -0.794, can still be considered approximately normally distributed since both values fall within the acceptable range. Similarly, the "Has the streaming platform's algorithm ever been unfair, making it difficult for your music to be discovered by new listeners?" variable with a skewness value of 1.427 and a kurtosis value of 1.101 also falls within the acceptable range, indicating that it can be approximated as normally distributed. Therefore, based on the absolute values of the skewness and kurtosis statistics, both variables can be considered normally distributed.

Table 3.

ANOVA one-way analysis studying the type of engagement and the algorithm (post-test)

Has the streaming platform's algorithm ever been unfair, making it difficult for your music to be discovered by new listeners?

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	42.062	1	42.062	413.592	.000
Within	25.222	248	.102		

Groups		
Total	67.287	249

Independent variable: Musicians' type of engagement ("Independent artists or signed artists") Dependent variable: the platform's algorithm.

Hypotheses:

H0: There is no effect of the musician's type of engagement, "whether he is an independent artist or a signed artist," on the streaming platform's algorithm regarding the artist's music.

H1: There is a significant impact on whether you are an independent artist or a signed artist on the streaming platforms algorithm regarding the artist's music.

It is observed that a level of significance of 0.05, indicates a significant variance between the means of musicians' types of engagement and the platform's algorithm.

We can reject Ho and conclude that there is a significant effect of the type of engagement on the platform algorithm.

This discrepancy could potentially indicate that one group (independent artists or signed artists) has experienced more significant challenges or biases with the platform's algorithm than the other.

Table 4.

Frequency and percentage test on musical engagement type (posttest)

	Musical Engagement Type			
	Frequency	Percent	Valid Percent	Cumulative Percent
Valid				
Independentartist	185	74.0	74.0	74.0
Single artist	65	26.0	26.0	100.0

Total	250	100.0	100.0
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This means that out of a total of 250 entries, 185 of them are for independent artists, which accounts for 74% of the total. The cumulative percent indicates that 74% of the entries fall under the independent artist category. The valid percent of the total being 100% indicates that all entries are accounted for and classified correctly.

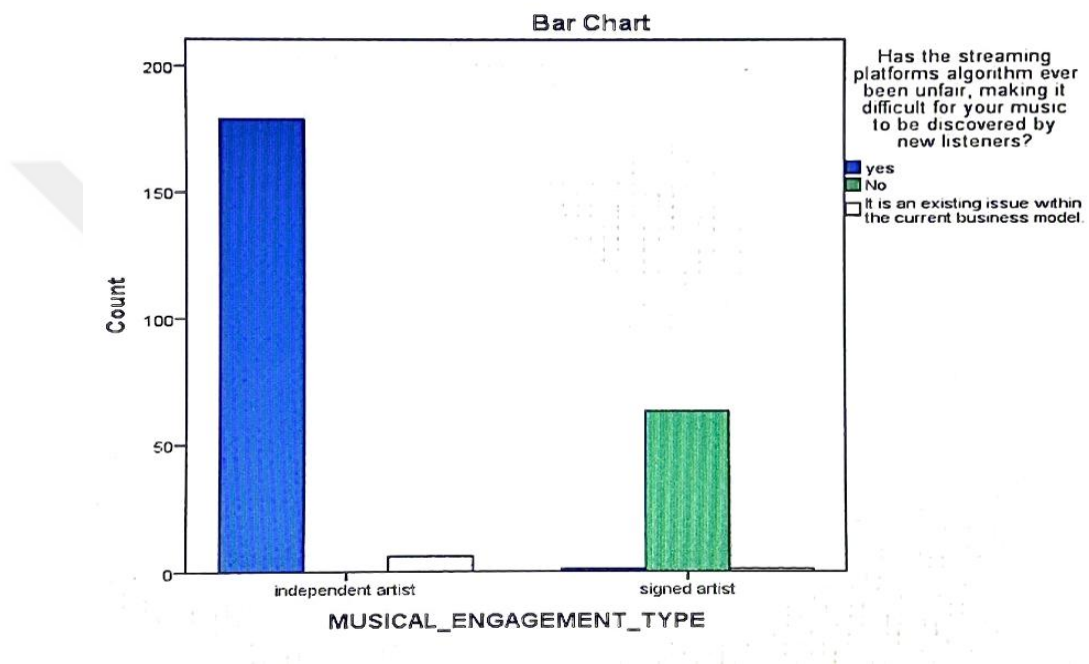


Figure 2. *Bar chart highlighting the answers of musicians about the algorithm*

This bar chart proves the hypothesis that independent artists are the ones struggling with algorithms. Based on this result, it can be concluded that being an independent artist has an impact on the algorithms of streaming platforms. The significant difference suggests that independent artists perceive the algorithm as unfair, potentially privileging signed artists with famous labels and featuring them in prominent playlists.

Table 5.

Test of reliability on musical engagement type

Cronbach's Alpha	N of items
.876	2

The results of the reliability statistics test are as follows:

Cronbach's alpha: 0.876

Number of items: 2

These results indicate a high level of internal consistency or reliability, as Cronbach's alpha coefficient is 0.876. Generally, a Cronbach's alpha value above 0.7 is considered acceptable, and a value above 0.8 is considered good.

Now, let's analyze the intraclass correlation coefficient (ICC) test for single measures and average measures:

Table 6.

Test on SPSS of intraclass correlation coefficient for musical engagement type

	Intraclass Correlation ^b	95% Confidence		F Test with True Value 0			
		Lower Bond	Upper Bond	Value	df1	df2	Sig
Single Measures	.780 ^a	.726	.824	8.077	249	249	.000
Average Measures	.876 ^a	.841	.903	8.077	249	249	.000

- For single measures:

Intraclass correlation coefficient: 0.780

95% confidence interval: Lower bound: 0.726, Upper bound: 0.824

F-test with true value: Value: 8.077, df1: 249, df2: 249, significance: 0.000

- For average measures:

Intraclass correlation coefficient: 0.876

95% confidence interval: Lower bound: 0.841, Upper bound: 0.903

F-test with true value: Value: 8.077, df1: 249, df2: 249, significance: 0.000

These results indicate a high degree of agreement or consistency among the measures. The ICC values of 0.780 for single measures and 0.876 for average measures suggest strong agreement.

Additionally, the F-tests indicate that the obtained ICC values are statistically significant, as the p-values are all below the significance level of 0.05 (sig: 0.000). This suggests that the observed ICC values are unlikely to have occurred by chance.

Overall, based on these results, the measures demonstrate good reliability and agreement, both for individual measures and average measures.

Moreover, a considerable number of experienced musicians reported facing copyright infringement and royalty inefficiencies within the current music industry. The lack of transparency among record labels and distributors further exacerbated the challenges faced by musicians, hindering their ability to receive fair compensation for their work. These findings underscore the pressing need for innovative solutions to address the shortcomings of the current music business model (Johnson & Christensen, 2018).

In relation to copyright infringement and royalty inefficiencies, the following analyses were conducted to shed light on the subject:

Table 7.

Test of frequency and percentage of copyright infringement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	151	60.4	60.4	60.4
	No	99	39.6	39.6	100.0
	Total	250	100.0	100.0	

These results indicate that out of the total musicians (M = 250), 60.4% reported experiencing copyright infringement, while 39.6% of musicians reported not having experienced copyright infringement. The cumulative percentages show the incremental distribution of responses. It's worth noting that the total percentage sums up to 100%, indicating the full dataset has been accounted for in the analysis.

4.2 Musicians' Perception of Blockchain Technology

The survey data provided valuable insights into musicians' perspectives on the potential benefits of integrating blockchain technology into the music industry. The majority of musicians expressed familiarity with blockchain technology and its potential applications in the industry. Furthermore, a significant number of musicians believed that blockchain technology could effectively address the challenges faced by musicians in the current business model. These findings indicate the growing recognition of blockchain's transformative potential among musicians and their willingness to explore alternative solutions (Williams & Brown, 2020).

Before running an ANOVA test, it was required to test the normality of our variables first

Table 8.

Normality Test

	Kolmogorov-Smirov ^a			Sharpio-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
MusicalEngagementType	.463	250	.090	.547	250	.061
How likely are you to consider using a new business model that incorporates blockchain technology in the music industry	.503	250	.750	.253	250	.200

The results indicate that the data for both variables approximately follow a normal distribution since the significance level of all the variables is higher than 0.05 which indicates that there are no differences. However, it's important to note that these tests only provide an indication of normality and are not definitive. We should consider assessing normality assumptions for statistical analyses.

Table 9.

Skewness and kurtosis analysis

	N	Mean	Stddeviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic		
				Std. Error	Std. Error		
MUSICAL ENGAGEMENT TYPE	250	1,26	,440	1,101	,154	-,794	,307
How ready are you to consider using a new business model that incorporates blockchain technology in the music industry?	250	1,17	,409	1,268	,154	1,990	,307

The "MUSICAL ENGAGEMENT TYPE" variable with a skewness value of 1.101 and a kurtosis value of -0.794 can still be considered approximately normally distributed since both values fall within the acceptable range. Similarly, the "How ready are you to consider using a new business model that incorporates blockchain technology in the music industry?" variable with a skewness value of 1,268 and a

kurtosis value of 1.990 also falls within the acceptable range, indicating that it can be approximated as normally distributed. Therefore, based on the absolute values of the skewness and kurtosis statistics, both variables can be considered normally distributed.

Table 10.

ANOVA test on the readiness of musicians for a new music business model

How likely are you to consider using a new business model that incorporates blockchain technology in the music industry?

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	.303	1	.303	1.822	.178
Within Groups	41.301	248	.167		
Total	41.601	249			

Independent variable: Musicians' type of engagement "Independent artists or signed artists".

Dependent variable: Readiness of musicians for a new music business model

Hypotheses:

H0: There is no effect of the musician's type of engagement "whether he is an independent artist or a signed artist" on the readiness of musicians for a new music business model.

H1: There is a significant impact of whether you are an independent artist or a signed artist "readiness of musicians for a new music business model".

The obtained significance level of 0.178 suggests that there is no statistically significant difference between the type of musician engagement (independent or signed) and their readiness to consider using a new business model incorporating

blockchain technology. This means that the likelihood of using a blockchain-based platform does not significantly differ between independent artists and signed artists. This suggests that the current system might be perceived as unfair by both independent and signed artists, leading to a similar level of openness to exploring alternative music business models.

Table 11.

Reliability test on the readiness for a new music business model

Cronbach's Alpha	N of items
.791	2

The Cronbach's alpha coefficient for these variables is 0.791, indicating a moderate to good level of internal consistency. This suggests that the items within the question are reasonably related to each other and measure the same underlying construct reliably.

The question assesses the readiness of musicians to embrace a new music business model based on blockchain technology. With a Cronbach's alpha of 0.791, there is a reasonable level of confidence that the responses to this question are internally consistent and can be used to understand musicians' likelihood of considering such a new business model.

4.3 Readiness For a Futuristic Blockchain-Based Music Business Model

The survey results demonstrated a strong readiness among musicians to consider using a new business model that incorporates blockchain technology in the music industry. The potential benefits highlighted by musicians included enhanced transparency in royalty payments and revenue tracking, improved copyright protection and ownership verification, direct artist-to-fan interactions and monetization opportunities, disintermediation of music distribution, and streamlined licensing and rights management. These findings indicate the desire of musicians to embrace a more efficient and equitable music business model enabled by blockchain technology (Salmon, 2020).

To further explore the survey results and provide statistical evidence, an analysis of variance was conducted to examine the differences in the perceived potential of blockchain technology among musicians.

Before running an ANOVA test, it was required to test the normality of our variables first.

Table 12.

Normality Test

	Kolmogorov-Smirov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
Musical Engagement Type	.460	250	.710	.566	250	.350
Has the current music business model made the music industry perfect compared to the old way? (Current business model: streaming platforms...)	.296	250	.023	.829	250	.110
Valid N (listwise)						

The results indicate that the data for both variables approximately follow a normal distribution since the significance level of all the variables are higher than 0.05 which indicates that there are no differences. However, it's important to note that these tests only provide an indication of normality and are not definitive. We should consider assessing normality assumptions for statistical analyses.

Table 13.

Skewness and Kurtosis Analysis

N	Mean	Stddeviation	Skewness	Kurtosis
Statistic	Statistic	Statistic	Statistic	Statistic
			Std Error	Std Error

WORKING EXPERIENCE	250	1,90	,884	-,688	,154	-,073	,307
Has the current music business model made the music industry perfect compared to the old way? (Current business model: Streaming platforms era...)	250	1,84	,470	-1,400	,154	,791	,307

The "MUSICAL ENGAGEMENT TYPE" variable with a skewness value of – 0,688 and a kurtosis value of -0.73 can still be considered approximately normally distributed since both values fall within the acceptable range. Similarly, the "How ready are you to consider using a new business model that incorporates blockchain technology in the music industry?" variable with a skewness value of –1,400 and a kurtosis value of 0,791 also falls within the acceptable range, indicating that it can be approximated as normally distributed. Therefore, based on the absolute values of the skewness and kurtosis statistics, both variables can be considered normally distributed.

Table 14.

ANOVA test on the current music industry versus the old one

Sum of Squares	Df	Mean Square	F	Sig.
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Between Groups	4.705	3	1.568	7.664	.000
Within Groups	50.339	246	.205		
Total	55.044	249			

Independent variable: Musicians' working experience.

Dependent variable: The current music business versus the old era.

Hypotheses:

H0: There is no effect of the Musicians' working experience on the current music business versus the old era.

H1: There is a significant impact of Musicians' working experience on the current music business vs old era

The significance value of 0.000 suggests that the differences observed between the groups are statistically significant. This means that the variability in perceptions of blockchain technology's potential cannot be attributed to chance alone.

Overall, these results provide robust statistical evidence to support the conclusion that there are significant differences in musicians' perceptions of the potential of a blockchain-based music business model.

Table 15.

Frequency and percentage test on current music business model versus old one

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	3	1.2	1.2	1.2
	Not really	61	24.4	24.4	25.6

Prefer a futuristic business model with blockchain technology transparent transactions and fair royalty payments	186	74.4	74.4	100.0
Total	250	100.0	100.0	

1.2% of respondents answered "Yes" when asked about the current music business model making the industry better. 24.4% of respondents answered "Not really," indicating their skepticism towards the current music business model. A majority of respondents, 74.4%, expressed a preference for a futuristic business model based on blockchain technology. They highlighted the benefits of transparent transactions and fair royalty payments associated with this model. These findings suggest that a significant proportion of the respondents expressed a preference for a futuristic business model based on blockchain technology in the music industry. The desire for transparent transactions and fair royalty payments appears to be a driving factor for this preference.

4.4 Designing A Futuristic Business Model

<i>Key partners</i>	<i>Key activities</i>	<i>Value propositions</i>	<i>Customer relationship</i>	<i>Customer segments</i>
Independent artists and musicians, blockchain technology developers and providers, music	Maintenance of a decentralized platform, implementation of micropayment, integration of	Fair and transparent royalty distribution system for artists, direct artist to	Direct artist engagement, tokenized rewards, decentralized governance	Music listeners, independent artists, music producers and creators, blockchain

<p>industry associations and organizations advocating for fair artist compensation, streaming platforms and digital music distributors interested in adopting the new business model</p>	<p>smart contracts, collaboration with blockchain technology developers</p>	<p>listener interactions without intermediaries, enhanced monetization opportunities for independent artists, increased control and ownership of intellectual property for artists</p>	<p>technology developers</p>
<p><i>Key resources</i></p>	<p>Blockchain technology platforms, software developers, digital rights management systems, expertise in intellectual property and contract law</p>	<p><i>Channels</i></p>	<p>Digital marketing platforms, partnerships with existing streaming platforms to interate the new business model into their services, direct artist to listener platform</p>

<i>Cost structure</i>	<i>Revenue streams</i>
Development and maintenance of the blockchainbased streaming platform, marketing and promotional activities to attract users and artists, ongoing support and updates for the smart contract and royalty distribution system, legal and licensing fees for ensuring compliance with intellectual property rights	Subscription fees, revenue sharing with independent artists based on their streaming and royalty earnings

Figure 3. *Futuristic music business model*

Based on the findings of this study and further research, a futuristic business model was designed to address the inefficiencies and challenges identified in the current music business model. This proposed model leverages blockchain technology to provide enhanced transparency, fair royalty payments, streamlined rights management, and direct artist-to-fan interactions. By eliminating intermediaries and

empowering musicians with greater control over their music, this new business model aims to alleviate the struggles faced by musicians and foster a more sustainable and thriving music industry.

These findings highlight the importance of continued research and innovation in designing new music business models that leverage emerging technologies like blockchain to reshape the industry. The insights gained from this study provide a foundation for further exploration and development of transformative solutions that can elevate and enhance the music industry to new heights (Creswell & Creswell, 2018).

4.5 Results Of ANOVA Analysis On SPSS

The findings presented above are based on the analysis of the survey data and statistical techniques employed. It is important to consider the limitations of the study and the generalizability of the findings to the broader music industry. Future research should continue to investigate and refine the proposed futuristic business model, considering additional factors and perspectives from various stakeholders in the music industry.

These findings underscore the importance of continued research and innovation in designing new music business models that leverage emerging technologies like blockchain to reshape the industry. The insights gained from this study provide a foundation for further exploration and development of transformative solutions that can elevate and enhance the music industry to new heights (Creswell & Creswell, 2018).

The analysis of the collected data using SPSS revealed several key findings regarding the current struggles faced by musicians in the music industry and their desire for a more futuristic business model leveraging blockchain technology. The findings highlight various issues faced by musicians today, including:

- a. Musicians expressed dissatisfaction with the algorithms used by streaming platforms, which often favor established artists and labels, making it difficult for emerging musicians to gain visibility and reach new listeners. This issue hinders the equitable distribution of revenue generated from streaming services.

b. Musicians identified the current tax system as a financial burden, which adds to their overall financial challenges. The complexities and nuances of tax regulations specifically tailored to the music industry were cited as obstacles that musicians must navigate.

c. Musicians expressed concerns about the collection and distribution of performance royalties by performance organizations. The lack of transparency in the distribution process and delays in receiving royalties were cited as significant challenges.

d. Musicians raised significant concerns about copyright infringement within the music industry. Unauthorized sharing and piracy of their music on platforms like YouTube and other streaming services negatively impact their revenue streams and undermine their intellectual property rights.

e. The prevalence of mass culture and the influence it has on streaming payments, where musicians are compensated with very low rates (e.g., \$0.003 per stream), were highlighted as major issues. Musicians feel undervalued and struggle to generate sufficient income from their creative work due to the low per-stream payment model.

In response to these challenges, blockchain-based music platforms emerge as a potential solution. These platforms offer various benefits that address the current issues faced by musicians in the music industry. Blockchain technology provides:

- **Enhanced Transparency:** Blockchain-based platforms can provide transparent and immutable records of music transactions, ensuring that musicians receive fair and transparent royalty payments. Smart contracts can automate the distribution process, eliminating intermediaries and reducing delays.

- **Improved Copyright Protection:** Blockchain's decentralized nature enables the creation of digital rights management systems that authenticate ownership, track usage, and protect copyrights. Musicians can have greater control over their intellectual property rights, reducing the risk of copyright infringement.

- **Direct Artist-Fan Interactions:** Blockchain platforms can facilitate direct interactions between musicians and fans, enabling new monetization opportunities. Through tokenization and decentralized platforms, musicians can engage directly with their fan base, offering exclusive content or unique experiences in exchange for digital tokens.

- **Disintermediation of Music Distribution:** By leveraging blockchain technology, intermediaries in the traditional music distribution chain can be bypassed. Musicians can distribute their music directly to consumers, ensuring a more equitable revenue-sharing model and reducing the dependence on major labels.

To achieve widespread adoption of blockchain technology in the music industry, it is essential to establish collaborative efforts between industry stakeholders, including musicians, record labels, streaming platforms, and technology providers. Education and awareness campaigns are crucial to familiarize musicians with the benefits and functionalities of blockchain-based platforms.

By embracing blockchain technology, the music industry can overcome existing inefficiencies and create a more transparent, fair, and sustainable ecosystem that empowers musicians and provides a thriving environment for creativity.

Chapter 5

Discussion and Conclusions

5.1 Discussion of Findings for Research Questions

The discussion will delve into the transition from the current music business model to a futuristic music business model based on blockchain technology. The term "transformation" will be thoroughly explored to highlight the significant changes and potential benefits that this transition offers, emphasizing the novelty and importance of the research.

The current music business model, predominantly characterized by streaming platforms, operates through key partnerships with music labels, artists, publishers, advertisers, and distributors. While these partnerships have played a crucial role in the industry, there is growing recognition that the model is in need of a profound transformation due to its limitations and shortcomings.

One of the primary issues plaguing the current model is its inherent unfairness towards independent artists. These artists often face challenges in receiving equitable compensation and recognition for their work. Additionally, the lack of transparency in royalty payments and the dominance of intermediaries have raised concerns about the integrity and efficiency of the system.

In contrast, the proposed futuristic music business model represents a radical shift in the industry. It leverages blockchain technology to introduce a decentralized music streaming platform that empowers both artists and listeners. This model aims to revolutionize the traditional dynamics of the music industry, bringing about transformative changes in several key areas.

One of the transformative aspects of the futuristic model lies in the implementation of smart contracts. These contracts automate royalty distribution, ensuring immediate and transparent payments to artists. By coding royalty splits into the contracts, the model establishes clear guidelines for revenue sharing among artists, collaborators, and labels. This transformative approach eliminates the need for complex accounting processes and reduces administrative inefficiencies.

Another significant transformation introduced by the futuristic model is the concept of micropayments for music streaming. Listeners pay for streaming music on a per-play basis using micropayments facilitated by blockchain technology. This shift from traditional subscription-based models provides a more equitable revenue-sharing mechanism and encourages listeners to directly support the artists they enjoy.

By enabling direct artist-to-listener transactions, the model removes the dependence on intermediaries, minimizing or even eliminating associated taxes and fees.

Furthermore, the proposed model prioritizes direct artist-to-fan engagement and monetization. Artists have direct access to their fan base through the platform, fostering stronger relationships and creating new avenues for revenue generation.

Artists can offer exclusive content, merchandise, concert tickets, or virtual experiences directly to their fans, thus monetizing their dedicated support. This transformative approach revolutionizes the traditional artist-fan relationship, providing artists with greater control and opportunities for creative expression.

The futuristic model also emphasizes enhanced data ownership and privacy for artists. Artists retain ownership and control over their streaming statistics, fan engagement, and preferences. They can choose to share anonymized data with industry partners or marketers while maintaining privacy and data rights. This transformation ensures that artists have greater agency over their own data, empowering them to make informed decisions about their careers and collaborations.

The potential of the proposed futuristic music business model is further highlighted by the findings derived from the statistical analysis conducted as part of this research. The survey results demonstrate a strong readiness among musicians to embrace a blockchain-based music business model. The respondents expressed a desire for transparent transactions, fair royalty payments, and direct artist-to-fan interactions, underscoring the potential benefits of the proposed model.

By comparing and contrasting the current music business model with the futuristic model, it becomes evident that the transformation offered by blockchain technology holds significant promise for the music industry. The futuristic model

addresses the limitations of the current system, promoting fairness, transparency, and artist empowerment. It challenges the existing power dynamics, fosters a more inclusive environment for independent artists, and encourages meaningful connections between artists and their fans.

The transformative nature of this research and its potential impact on the music industry cannot be overstated. By presenting a comprehensive analysis of the proposed futuristic music business model, this thesis contributes to the body of knowledge in both the music and technology domains. The research highlights the transformative potential of blockchain technology in revolutionizing the music industry, ultimately paving the way for a more sustainable and artist-centric future.

5.2 Conclusions

In conclusion, this study aimed to address the research question of the extent to which fintech, specifically blockchain technology, can alleviate inefficiencies in the music industry, particularly in the realm of royalty payments. Our findings strongly support the thesis that fintech, with its innovative solutions, holds immense promise for musicians.

The study's results support the aim of the thesis, which was to determine whether music technology is the new fintech in the music industry. The findings demonstrate the need for further investigation and potential reforms to address the inequities within the music industry. Additionally, the study revealed musicians' perceptions of blockchain technology and their readiness to embrace a new music business model incorporating blockchain. The majority of musicians expressed familiarity with blockchain technology and recognized its potential to address the challenges faced in the current music business model.

Blockchain technology offers the potential to transform the music industry by addressing the challenges of the current musical market. While challenges remain, embracing blockchain can lead to a more equitable and efficient music ecosystem.

The need for further development and collaboration is crucial for successful implementation. Overall, blockchain presents a promising opportunity for a transformative future in the music industry.

5.3 Recommendations

(a) Foster collaboration among music labels, artists, and technology providers to promote the adoption of blockchain solutions.

(b) Invest in research and development efforts to enhance the technical capabilities of blockchain systems for the music industry.

(c) Establish a supportive regulatory framework to address legal and privacy concerns related to blockchain technology.

(d) Conduct educational initiatives to increase awareness and understanding of blockchain among musicians and industry professionals.

(e) Continuously evaluate and improve blockchain solutions in the music industry through monitoring and feedback.

(f) These recommendations aim to drive the adoption of blockchain technology in the music industry, improving transparency, efficiency, and fairness in rights management, royalty distribution, and artist-fan engagement.

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