

Numerous innovations that have affected lending and deposit services, partner loans (P2P), and the use of social media. Issues related to investments, financial markets, trade, risk management, robot consulting, and services influenced by blockchain and fintech innovations (Gomber et al., 2018). Some researchers examine the economic and technological factors that motivate entrepreneurs to make investments aimed at recreating financial technology (fintech). They find that countries are facing more FinTech start-ups grow, with well-developed economies and easily accessible venture capital. In addition, the numbers of secure Internet servers, mobile subscriptions, and the existing workforce have a positive impact on the development of this new market segment. Finally, the more difficult it is for companies to access loans, the greater the number of FinTech start-ups in a country. In total, the fintech not random, and active policies can influence the emergence of this new section. (Haddad et al., 2019).

The financial sector is meeting a fundamental transformation. Utilizing digital technologies to present innovative services, and some researchers can find FinTech start-ups in areas such as asset management, lending, or insurance. Despite the increase in investment, there is little academic research on FinTech phenomenon. So far, FinTech start-ups' proposals have been mainly examined from a functional perspective. Since a functional perspective is not sufficient to fully understand the proposals of FinTech start-ups, they propose a classification of non-functional features. Thus, they limit their analysis to FinTech start-ups that are consumer-oriented. Their classification consists of 15 dimensions structured along with vision, data, and revenue generation. They demonstrate the application of their classification by classifying the proposals of 227 start-up companies FinTech and by identifying prototypes through cluster analysis. Their classification contributes to descriptive knowledge of FinTech start-ups; provides researchers to analyze FinTech start-up service offerings in a structured way. (Gimpwl et al., 2018). In another article, some worked on the editorial protocol. They describe the recent FinTech phenomenon and the new editorial protocol used for this particular topic following the reporting format. They will discuss what they have learned from the suggestions on the FinTech field and which one they have chosen to complete, and finally, it will be presented in this special topic. They also offer a variety of observations to help guide future research in the emerging FinTech area (Goldstein et al., 2019).

In a review paper, researchers find the most important articles in this area. This article is a review of the fintech literature and its interaction with banking. Innovations in payment systems (including cryptocurrencies), credit markets (including P2P loans), and insurance are included in fintech, with smart contracts involving Blockchain. This article defines fintech in some way, examines some statistics, and then examines the theoretical and experimental literature. This review is organized around the four main questions of the research. This article summarizes their knowledge of these questions and concludes with questions for future research. (Thakor et al., 2020). The purpose of another study is about finance in real life. This technology is not to improve finances, but to improve finances in real life. Fintech has grown much faster in China than in many developed countries like the United States. In China, this success has been achieved not through the core technology advantage but through the integration of finance and real needs. This experience has

important implications for understanding financial innovation and inclusive financial development. (Chen et al., 2016). In an interesting case study, some researchers study fintech in China. This case study examines the development of a FinTech company in China that offers microcredit to students. Here are five lessons learned for organizations to better manage challenges and seize opportunities amid financial turmoil. Their findings also shed light on how digital technology 1) provides a company with the strategic ability to occupy the financial market, 2) allows alternative credit scores based on non-traditional data, and 3) Financial inclusion of previously excluded sectors of the market improves (Leong et al., 2017).

Social and political subjects and fintech could be a significant interdisciplinary area. In research, we can find related information. This article is a fundamental step in examining the interaction between fintech and it is still an obvious social and political context. This article also discusses the policy implications for China's fintech industry, noting the changing role of government in boosting national industry growth inside and outside China. (Shim et al., 2016). In another article, researchers examine FinTech and the integration of FinTech with other green technologies, as well as with digital agriculture. For example SDG 12, in particular, responsible production, because it can reduce trade and increase cooperation between the environment. And social SDGs, for example, 1 and 15, increase profitability without additional use of natural resources. Significant constraints and risks need to be addressed so that developing countries can take full advantage of FinTech's potential in this area. Discount factors include large-scale investment in infrastructure and large-scale capacity building. Careful research into the economic sustainability and cost-effectiveness of newer FinTech models is required to make sound policy recommendations. (Hinson et al., 2019). Another study is related to the global perspective and to improve the understanding of the fintech global perspective. This research is based on the analysis of start-ups that participated in the Innotribe SWIFT competition. To analyze the cluster of fintech landscape structure, they used cluster analysis to group 402 fintech start-ups and then select the representative items. The main findings of this work are: (1) The development of fintech clusters for the classification of core services, commercial infrastructure, and core technologies, which is a feature of fintech. (2) Analyze how different technologies are synthesized to restructure the flow of financial information through fintech through competitive mechanisms and brokerage collaboration, access, financing, hybridization, and personalization. (3) Analyze related strategies to create value concerning the competitive and collaborative mechanisms identified. Overall, their results provide new insights into the diversity and range of emerging innovations and technologies that are transforming the financial services industry around the world. (Gozman et al., 2018). Also, a study analyzes whether mobile payments in the fintech era are still relevant. I compare three mobile payment projects - Oi Paggo in Brazil, TCASH in Indonesia, and M-PESA in Kenya - as case studies. I argue that mobile payment systems now work in such complex and multidimensional networks with shared infrastructure, competing with that infrastructure to generate and deliver value to customers. Three characteristics of the industry and network structure are immediately considered, and (3) openness may decrease or increase even as the number of independent parties in the supply chain decreases (Iman et al., 2018).

An article purpose to fill the knowledge gap in the existing literature on bitcoin, blockchain, and fintech. It starts by clarifying the definition of these concepts. This article presents the applications, benefits/value, and challenges/issues of bitcoin, blockchain, and fintech in several industries through a systematic review and case studies in the supply chain industry. It also presents the research methods/approaches used during such research. The classification framework has been prepared and will be used as a basic study to analyze 141 articles from the top five academic databases. It provides an opportunity to assess the level of knowledge about bitcoin, blockchain, and fintech and their evolution over time. Findings show that these technologies are evolving and organizations are welcoming them for competitive advantage. Therefore, organizations should use research on these technologies to better understand them, optimize their business strategies, and create basic insights for decision making. (Fosso Wamba et al., 2020). In addition, a study aims to explain the role of FinTech digital banking start-ups in the financial industry. They examine the impact of the budget of such start-ups on the stock returns of the current 47 US retail banks for 2010-2016. To understand the importance of starting FinTech, They use data on budget dollar volume and number of transactions. They relate these to stock returns through panel data regression methods. (Li et al., 2017). Germany lags behind its counterparts in the use of new digital technologies and financial services provided by high-tech non-banking start-ups (eg FinTech). Using survey data, some researchers analyze which FinTech service families are most likely to choose. Their results show that the level of trust and comfort of a household with new technologies, financial literacy, and overall transparency, affects its desire to use FinTech. In particular, households with low levels of trust, good financial education, and a preference for transparency are more likely to adopt FinTech. In contrast, understanding household prices does not appear to significantly affect the likelihood of switching (Jünger et al., 2020).

In a paper, researchers study the formation and dynamics of entrepreneurial clusters in the emerging fintech industry. Using the detailed information of approximately 1000 FinTech start-ups in France to date, they find that most FinTechs are geographically clustered, and on the other hand, the location of the new FinTech clusters in terms of clusters and the presence of a chicken machine. Killing is affected. Larger clusters attract new FinTech start-ups, and the incubator is shown to be an effective mechanism for attracting new FinTech start-ups. They went on to look at fintech entrepreneurship and found that being in a larger cluster reduces the risk of failure but increases the likelihood of success. Increasing competition in a particular segment of fintech increases the rate of failure. In addition, the risk of failure for fintech start-ups created in the incubator is significantly lower (Gazel et al., 2020). Moreover, another study emphasizes an approach that emphasizes the processes of abstraction from productive activities, mediated through specific infrastructures, as key elements of financial accumulation. According to this view, psychometrics in particular and alternative validity data more broadly can be an incomplete attempt to deal with three sets of constraints - (1) the necessarily reducing nature of abstract patterns, and the challenges they face. With complex processes in (2) the methods of interaction of credit scoring systems with the infrastructure of existing financial systems, and (3) the difficulty of realizing financial gains in the context of large uncertain livelihoods. A look at alternative forms of credit data from this

perspective offers a way to understand fintech's short and rugged trends and hence to reflect more critically on the limitations of financial processes. (Bernards et al., 2019).

FinTech, a phenomenon that encompasses the fields of information technology and financial innovation, is on the rise and is gaining more attention among physicians, investors, and researchers. FinTech Media is widely discussed by the media, which constitutes its understanding and expresses social beliefs, however, this perception of FinTech must be supported by empirical evidence. Therefore, some researchers examine five Swiss FinTech companies through the conceptual framework of understanding FinTech and its dimensions, thereby analyzing the nature of FinTech's innovations. In this way, they expand the understanding of fintech and provide fertile ground for further research in this area.) Zavolokina et al., 2016).

This article highlights the gaps in economics and finance research on the two uses of FinTech, which include: blockchain and blockchain. An analysis of these records shows that (1) current research on FinTech is divided into limited theoretical contexts. (2) Collective investment and blockchain can be considered as two innovations that may disrupt traditional financial intermediation but in different ways. (3) Collective investment platforms replace traditional financial intermediaries and act as a new intermediary, without the need for intermediation. (4) Similar to collective investment, blockchain also creates new intermediaries. And (5) the blockchain's inherent trust element enables this blockchain to eliminate the need for intermediaries in some but not all areas of finance. (Cai et al., 2018). Another article supports the growing field of financial technology (fintech) and various financial paradigms and technologies. Fintech is primarily an anti-intermediary force in which disruptive technologies are the driving force. The framework discusses the top 10 areas in fintech, including a classification, which categorizes research in the field and also proposes an educational structure. FinTech problems are also analyzed. Overall, major advances in computing, mathematics, statistics, psychology, econometrics, linguistics, cryptography, big data, and computer interfaces have sparked an explosion of advanced technology (Das et al., 2019).

In another article, some researchers examine the effects of the entry of financial technology-based companies (FinTech) on competition in the retail payment market. With a two-way model of the market with vertical restraints, they obtain the following results. When only one vertically integrated provider (or end-to-end service) is allowed to enter, or all merchants choose multiple homes, or no entry occurs, regardless of legal requirements. On the other hand, if the entry of a downstream (or front-end) service provider is permitted, a sub-equilibrium may be created under certain conditions in which the entry of the end-to-end service provider does not occur. The existence, without rules, of a voluntary integrated vertical operator, does not generally provide return service to the participant. This indicates the need for appropriate regulatory measures to achieve the desired social outcome of the new entry into the retail payment market (Jun et al., 2016).

The purpose of another article is to discuss the ideation of the approaches needed to create products and services and to present ideas for new services by introducing examples. In recent years, the keywords of new technology, FinTech and IoT (IoT) have been considered. The spaces between technologies and services that penetrate the market and disappear. And industries have been

observed that try to improve and expand their existing lives, jobs, and services by introducing the latest technologies. FinTech or IoT must integrate into the community to go beyond this goal and create new business models or services that do not derive from their existing business contexts or services. While some simply maintain existing business contexts that lack the potential for corporate development, several companies find it difficult to develop business through advanced concepts because they are limited in existing capabilities. Therefore, there is a need to find ways to create business and service models that are profitable, sustainable, and meet the needs of society. Products and services using technology have been in demand for years and can sometimes threaten the survival of existing businesses. This clearly shows that such products and services are essential for social creation. (Nakashima et al., 2018). Another paper examines the relationship between community poverty, racial composition, and fintech rates. Rural poor communities experience the digital redistribution line with the lowest fintech rates. The increase in the white population of rural communities is accompanied by higher speed internet rates, a white advantage that can be seen even in extreme poverty. Concepts are discussed. (riedline et al., 2020). Another article analyzes the institutions and infrastructure available for payment. A valid settlement based on central bank support is essential for high-value, retail payment systems. And, in the European Union, the United Kingdom, and the United States, the importance of regulation is recognized to support customers using retail payment systems. In this institutional context, payment innovations (including bitcoin and distributed office or autonomous organization technologies) are evaluated. It is suggested that although competition at certain levels will bring social benefits through business development, the maintenance of public interest objectives necessarily determines the scope of competition. Although this may limit the detrimental effect of payment innovations, it is said that due to public policies to build a stable and efficient public infrastructure and social needs, trust and confidence in a predictable and adjusted payment system Trade and commerce. Social expectations, such as consumer protection, are not necessarily desirable. (Chiu et al., 2017).

In the special issue, we can find some interesting date. This special issue is an important political and political guide by presenting a collection of seven new articles from four parallel streams of literature related to financial literacy and responsible finance. A growing body of evidence suggests that financial literacy plays an important role in financial well-being, and that differences in financial knowledge acquired early in life may explain a significant portion of financial well-being and more generally in adult life. Financial technology (FinTech) is revolutionizing the financial services industry with unparalleled speed. Opinions differ on the potential impact of FinTech on personal financial planning, welfare, and social welfare. (Panos et al., 2020).

The purpose of another paper is to determine location-specific factors related to the severity of FinTech deployment using the Porter Diamond Framework. This analysis is based on a nationwide data set covering the period 2017-2017 and 107 countries. The results show that the greater intensity of FinTech deployment is characteristic of smaller countries, countries with stronger ICT clusters, and countries in crisis over the past decade. The intensity of FinTech deployment is higher in countries with higher enrolment rates, university-industry collaboration, greater fixed-line access, and overall ICT readiness. Macroeconomic

status and financial development indicators are the most important determinants of FinTech formation. Given the importance of different dimensions of diamonds in the formation of fintech, fintech entrepreneurs can benefit from a detailed analysis of the diamonds of places they consider as potential places of business. Countries hoping to become more attractive FinTech start-up sites, in close collaboration with FinTechs, should focus on fixing weaknesses in diamonds (Laidroo et al., 2019). The purpose of another study is to outline the direction and tasks for the Korean Fintech industry, taking into account the importance of successful Fintech performance and security. News data from the most popular Korean portal site Naver has been collected and analyzed and ranked 20 most common keywords in 2015 and 2016. Fintech services have become keywords since 2015 when Fintech started working in services, payments, operating systems, banking, etc., and security, company, support, finance, etc. are the keywords in 2016. The results show differences in importance. The findings also provide guidance on safety principles for companies providing Fintech services. (Li et al., 2017). Also, a paper examines existing regulations and analyzes how the UK can build an advanced structure to attract and deploy more high-caliber FinTech entrepreneurs while providing strong customer and investor support to ensure financial stability. The plan proposes unprecedented legal and political reforms to the Sandbox structure, including a licensed model for using the budgets of amateur private investors worldwide. (Truby et al., 2020).

2 Methodology

In this section, there are some of the most famous categories of fintech start-ups and then famous Iranian fintech start-up category and ecosystem.

We can find the Ian Martin category on the internet and by this category, all fintech companies are in 7 main categories:

- 1 Lending: In fact, financial technology companies are changing the lending process. People don't need to turn to banks or credit unions to borrow money anymore. Many FinTech companies are now making loans directly to consumers. Consumers can request loans online and get approval quickly. FinTech lenders assess borrowers' creditworthiness quickly and automate the underwriting process. These new models allow FinTech lenders like Kabbage and Borrowell to offer loans to more borrowers.
- 2 Payments: Payments are another category of the financial technology market. Companies in this category let people send money to each other without needing to turn to banks. Banks tend to charge exorbitant fees for simple payments like peer-to-peer transfers. FinTech companies let consumers send money quickly and cost-effectively. Technologies like blockchain are making it possible for these companies to process payments more cost-effectively than banks can.
- 3 International Money Transfers: Traditionally, internal money transfers have been very expensive. Banks and traditional money transfer companies charge up to eight percent in fees. For large money transfers, these fees add up quickly. Worse, traditional transfers are slow. Financial technology companies in this category are offering faster, less expensive international money transfers. Ripple, a company in this category, can send international money transfers in eight seconds, according to Financial Post.
- 4 Personal Finance: Personal finance is another major category

of the financial technology market. In the past, people needed to talk to financial advisors at banks to get personal finance advice. To budget, they needed to use spreadsheets or an envelope system. Now, there are plenty of apps on the market that can offer advice and help with budgeting. Consumers can get personal finance advice anywhere, at any time. Companies like Mint help consumers create budgets, while Level Money helps consumers save. There are also FinTech companies providing retirement or investment advice.

- 5 Equity Financing: Financial technology companies are transforming equity financing, too. Companies in this category of the FinTech market are making it easy for businesses to raise money. Some companies work to connect accredited investors with vetted start-ups. Others use a crowdfunding model and let anyone invest in new businesses. These companies simplify the fundraising process for businesses. Virtual fundraising is also easier for investors since everything can be done online.
- 6 Consumer Banking: Consumer banking is another category of the financial technology market. Traditional banks charge high fees, so companies in this category present an alternative for consumers. These companies also have the opportunity to reach underbanked consumers. Consumers who can't get approved for a credit card—or don't want one—can get prepaid cards from FinTech companies. Companies like Green Dot and Netspend are active in this category. Some companies, like Moven, provide digital banking services. Consumers can use digital bank accounts instead of using a traditional bank.
- 7 Insurance: Financial technology companies have recently branched out into the insurance market, too. Many companies in this category are focusing on distribution. They're using new technologies like apps to reach customers that are underserved by insurance. They're also more flexible than traditional insurers. For example, people who want to borrow a friend's car can buy car insurance for just a few hours. Since the insurance market is highly regulated, companies in this category tend to partner with traditional insurance companies.

3 Fintech start-ups in Iran

According to statistics published by International World Stats (IWS) until December 31, 2017, there are 56,700,000 Internet users in Iran, which is 69.1% of the population. In 2017, the central bank and government introduced new regulatory measures. However, up to now, fintech companies have had a very small share of the market in Iran. Banks with their electronic services are pioneers in providing financial services. The internet finance in Iran is now mostly PSP-based, which offers shops online services for accepting electronic payments by a variety of payment methods including credit card and bank-based payments.



Figure 1: Fintech start-up companies categories

There are around 50 famous fintech start-ups in Iran's financial market. A proper legal framework is the main problem in this market. Recently central bank of Iran and Tehran stock exchange are working on this legal framework. We can use the 7 main categories for fintech start-up for Iranian fintech based on figure 1: Online payments, Exchange & remittance, Wallet & P2P, Lending, PFM & banking, Money management, Investment.

Also, according to Iran fintech ecosystem there are 14 sections (Figure 2):

Banks (Mobile apps), International payment, Insurance, Cryptocurrency and blockchain, Accounting and Personal financial management, Announcement application (for Currency, Gold coins), Credit rating, stock market and investment, Security, Banking and Open API, Crowdfunding, Lending, payment, Authentication (Table 1).



Figure 2: Iran fintech ecosystem

Table 1: The main fintech start-up companies in Iran

Bank	Mobile banking applications: Mellat bank Day bank and so on.	Others (such as banking on social media app: Bale, Jam)
International payment	Yek Pay Nik pardakht Iranikart and so on.	
Insurance	Bimebazar Bimito And so on.	
Cryptocurrency and blockchain	Areatak Exir Excoin	

Accounting and Personal financial management	Holoo Mahak Nivo PFM
Announcement Apps (Currency, Gold coins)	Mesghal Dorially
Credit rating	MyCredit Merat Sanjineh
Stock market and investment	Signal APP Rahavard365 Signal APP Rahavard365
Security	Bugdasht
Banking and Open innovation	Fraboom Cobalt
Lending	Ghesta Lendo
Crowdfunding	Caren Crowd Dopro
Payment	Payment companies application: Top Riva AP payment application: Ez PAY Bitpay
Authentication	UID

In this part, we explain some of the fintech start-ups in Iran:

- **Phonepay:** It is a mobile payment platform and founded in 2017. Users can pay for taxi by this application without cash or change. It founded by Rahkarhaye Hooshmand Sarina Company (formed in 1996, Tehran) and users can use QR code for their payments.
- **Quantcan:** It is a web-based algorithmic trading platform with a concentration on Iran's financial market and securities.
- **Baman:** It is an online mobile payment platform similar to phonepay which is founded in 2016. It has users in Khorasan Razavi province and users pay for taxi in Mashhad.
- **Golak:** It is a saving platform and user can set some goals for his financial payments. It could be a PFM (Personal finance management) application for managing banking accounts and analysis of cost and income.
- **CoinEX:** This fintech start-up have some services for buying and selling cryptocurrencies. This platform is secure, stable and professional for cryptocurrency exchange.
- **Finto:** An online salary system for human resource management for companies. Companies can use it for their salary and tax system.
- **Nobitex:** It is a platform for Bitcoin transaction in Iran. It applied for exchanging cryptocurrencies with Iranian local currency (IRR-Rial).
- **Iranrenter (lendo):** This platform is for lending money by a simple and easy way.
- **Ghabzino:** Pay bills easily by categorize and automatic payment system.
- **Zarinpal:** An online and electronic payment system and transferring money founded in 2010 in Iran (Zarin gate, Zarin card, Zarin liknk, Zarin Guarantee, Personal link, e-wallet).

- **UP (Asan pardakht Persian co):** An online payment system for many payment services (Internet account, Transferring money, bill payment, donation and so on). In 2015 it was the 28th company of largest 150 acquirers worldwide.
- **Payping:** This fintech start-up present a payment gateway for companies. User can make a link for payments and use it in social media.
- **QuantCan:** An algorithm trading platform for stock market for trader's trading strategies.
- **Sharjeman:** An application for paying cost of building by dividing costs between owners.
- **Fundoran:** It is a crowdfunding platform for supporting user's ideas. There are many crowdfunding applications such as Fundino and Donate.
- **Mobile bank apps:** All banks have their mobile banking applications for presenting their banking services. The most famous of them with the highest download rate is Mellat bank mobile application. In addition, some banks such as Melli, Pasargad and Mellat have developed their mobile banking applications and add social media to them.

4 Conclusions

Fintech is a portmanteau for financial technology. Fintech refers to software, algorithm, and applications for both computer and mobile-based tools. Fintech was initially applied to the technology used at the back-end systems of established financial institutions when fintech emerged in the 21st Century. Since then, however, there has been a shift to much more consumer-oriented services and products, and therefore a more consumer-oriented definition. Fintech now includes different sectors and businesses such as education, retail banking, fundraising and nonprofit, and investment management to name a few. Fintech also includes the development and use of cryptocurrencies such as bitcoin, Ethereum, and Tether. While that segment of fintech may see the most headlines, the big money still lies in the traditional global banking industry such as payments and its multi-trillion-dollar market capitalization.

In this article, we reviewed some important papers and then collect all of the most famous fintech start-up companies in Iran. As we can see in table 1, there are many fintech start-ups in the payment section. However, there is no important fintech start-up in international money transfer. Since Iran is under sanctions, international money transfer is not possible in Iran. So, fintech start-ups cannot cover this area.

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