

A Comparative Analysis of the Issues Related to Fintech Development in Kazakhstan and China

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Abstract

The relevance of fintech development in Kazakhstan is evident due to the ever-growing role of financial technologies not only there but also worldwide. This expansion is closely tied to the progress of electronic commerce and advertising, technical development, socio-demographic changes, and social development. The article identifies problem areas of fintech development in Kazakhstan and provides practical methods for solving them. The main research method is structural-analytical, which combines all the problem areas of fintech into structural units and considers their importance. A forecasting method is also applied to predict certain scenarios of fintech development in Kazakhstan. The practical methods of solving the issues related to fintech development can be characterised as methodological, analytical, informative, effective, and predictive. The predictive component made it possible to determine the obstacles in fintech development and ways to achieve results. The results are of great importance due to the relevance of fintech in Kazakhstan. Although it is likely to develop well, there are numerous obstacles, both public and private, and the measures for overcoming the problematic areas will be important and effective. Given the country's advantages, Kazakhstan is capable of becoming a leader in financial technology start-ups.



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Introduction

In the modern world, China leads the financial technology market (Akhmetova et al. 2021). Therefore, it is useful from a methodological standpoint to compare the dynamics of the development of financial technologies in China and Kazakhstan (Tan, He, and Teng 2022). The objective of the study is to identify the causes of financial technology growth and problem areas, including geographical, international, state, and socio-demographic factors. The financial technology market in Kazakhstan has doubled annually since 2014, and even greater growth was provoked by the 2020 COVID–19 pandemic. The financial technology market is vast and heterogeneous. Dozens of companies operate in nine fintech segments in the country, the most important of which are payments and transfers. Previously, microcredit was also an important area (Baidybekova 2019). However, in 2020, the law on microcredit was adopted, and now this segment is absent in fintech (Akhmetova et al. 2021). The structure of Kazakhstan fintech is crowdfunding, online accounting, infrastructure solutions for banks and microfinance, neobanks, marketplaces, venture funds, loyalty, payments, and online lending. Studying the role of these segments in fintech makes it possible to evaluate the scientific and practical value of their development (Kuruchbekova 2018).

The development of financial technologies around the world is rapid (Rubini 2020), and Kazakhstan is no exception. However, to date, there are few studies on financial technologies there. It is possible to present a qualitative study devoted to the geographical and socio-demographic issues of Kazakhstan. The country is vast and sparsely populated, which has advantages and disadvantages for the development of financial technologies. A large and sparsely populated area requires large investments in the development of the Internet, and the size of the country creates a demand for the development of financial technologies (Tanda and Schena 2019). In this regard, Kazakhstan can be compared with China. The socio-demographic feature of the Kazakh population is positive. Thus, a large proportion of ambitious young people, who are the most active users of financial technologies, can contribute to their development (Ziyabekov, Akindeev, and Yakushev 2019).

E-commerce is developing in Kazakhstan, despite difficulties associated with the volatility of the national currency exchange rate. Online shopping sites are currently seen as a “showcase”, where consumers view products before buying them offline (Denissova and Born 2021). Banking operations related to the sector and consumer lending ser-

vices are faced with low-quality loan portfolios and a growing risk of loan default due to a decrease in real incomes. Nevertheless, this makes it possible to develop the credit sector of financial technologies. Online lending services can complement conventional banks, focusing on borrowers without official income, those who have poor credit scores, and the unbanked population (Baymuldin and Shaugumbekova 2021).

Financial technologies in Kazakhstan are at an early stage of development and can provide the market that adopts the latest, proven services and products. A favourable technological infrastructure of the Internet and financial institutions is being created. The COVID-19 pandemic affected the economic situation at the beginning of the new decade. It was accompanied by the devaluation of the national currency and a decrease in the real incomes of the population. These problems limit the development of financial literacy among the population and increase people's vulnerability to the risks associated with new virtual products (Akhmetova et al. 2021; Pysmak, Mazhnyk, and Sigaieva 2021). Kazakh banks have mastered tools such as advanced Internet banking, electronic purchases, and banking management, and they have gained the trust of many consumers. Financial technologies have huge prospects for development and innovation. The neighbouring country, China, is a great example of financial technology development and application in everyday life. Modern technologies allow people to overcome distances and perform financial transactions remotely. Therefore, the country must quickly integrate itself into a dynamic virtual market (Baidybekova 2019).

Materials and methods

The main research method is structural-analytical, combining all the fintech issues into structural units and analyses them. The reasons for fintech growth in Kazakhstan and the obstacles that hinder it are identified. The forecasting method is used to establish the stages of fintech development in the future. Fintech in Kazakhstan is most frequently compared with the Chinese fintech market. For that reason, the comparative-analytical method is applied. The issues related to fintech are relevant, and the methods for solving them can be practically applied. Several fintech issues are systemic and structural. Thus, the main task is to identify them using annual statistical data on fintech development. The question arises about whether neighbouring countries have the same issues and how they solve them. It is essential to cover Kazakh society – its geographical location and socio-demographic characteristics, the population's mentality, Internet availability, and the percentage of people who use smartphones in everyday life.

The research was conducted in three stages.

1. Comparing Kazakh and Chinese fintech using data from articles. Chinese fintech is an example of Asian fintech development. The geographical proximity of China and Kazakhstan makes such a comparison very effective. People aged 20–34 in both states occupy a quarter of the total population, and they are most actively involved in developing fintech and fintech start-ups.
2. Combining the fintech issues in Kazakhstan into structural units, which required structural-analytical and systems methods. The systems method allowed us to consider the fintech issues from various perspectives. Considering one issue will consequently lead to examining other issues. The study analyses these structural units and identifies ways to solve them. For example, lending is associated with the volatility of the tenge – the national currency. Introducing the Chinese lending method – through Chinese banks and its national currency, the yuan – is inappropriate since it harms the Kazakh banking system. Microcredit development is also hindered by the instability of the tenge and high-interest rates in banks. To develop this sector, the percentage of microcredit should be lowered, and the guarantees of microcredit repayment should be increased (Thomas 2018).
3. Forecasting the fintech development in Kazakhstan. The forecasting method effectively determines the current and future state of the economy in Central Asia, specifically within the Commonwealth of Independent States (CIS). It takes into consideration the challenging geographical position of Kazakhstan as well as the socio-demographic characteristics within society. The socio-demographic state in Kazakhstan's society is quite optimistic, providing new opportunities to develop structural units of fintech such as Internet banking, lending to various consumers, electronic purchases, and banking management. The optimal forecast for fintech development provides great opportunities for the future (Scorpio 2019).

The fintech market has developed exponentially in China. Its geographical and socio-demographic features and the lack of banking resources for a large population have created favourable conditions for e-commerce development and the increase in electronic wallets and online payments. Alibaba, one of the largest e-commerce companies in the world, is located in China (Akhmetova et al. 2021). What is the basis for the success and progress of the fintech industry in China? Several factors contributed to this at once. Firstly, the number of broadband Internet users in China is growing rapidly: in 2016, there were 731.4 million, more than in the United States and Europe combined. In addition, 95% of these “advanced” citizens also use mobile Internet due to the widespread development of wireless communications in cities. Although the overall level of national internetisation was only 53%, considerably lower than in developed countries, its absolute values provided an effective “quantitative” platform for the development of various online services (Baymuldin and Shaugumbekova 2021).

Results and discussion

Fintech is also actively developing in Kazakhstan, although the results are not yet so impressive. For example, the market was strongly exposed to drastic changes in the tenge exchange rate, especially online payments and transfers. Nevertheless, Kazakhstan is considerably ahead of China in Internet infrastructure (Baymuldin and Shaugumbekova 2021). By successfully combining established production with an extensive national market, the rapid growth of people's purchasing power, and the advancement of Internet technologies, e-commerce in China has led to a phenomenally rapid development of fintech. In Kazakhstan, the data on online commerce is not so impressive. Internet sales are only 3% of retail sales (compared to 12.6% in China). However, e-commerce has not yet been established enough to become a leader in fintech development (Ziyabekov, Akindeev, and Yakushev 2019).

According to experts, another reason for fintech development in China is the “underdeveloped” banking sector. Most Chinese banks are, to some extent, state-owned and primarily serve the corporate sector. Meanwhile, the banks that deal with private clients offer banking products that do not meet modern needs. Fintech companies were the only ones capable of meeting the demand of Chinese consumers and considerably increased their appetite by offering them alternative forms of financial services. Compared to their Chinese counterparts, Kazakh banks are more focused on lending to the retail segment: credit penetration among the economically active population is constantly growing, covering more than half of the population. Online transfers and payments are gaining momentum, and banks can expand their positions in this market. Nevertheless, Kazakh banking activity in the consumer lending sector is characterised by the poor quality of the loan portfolio and the growing risk of loan default due to a decrease in the real incomes of the population (Ziyabekov, Akindeev, and Yakushev 2019).

An important factor in the development of fintech in China is the youth. People aged 20 to 34 account for about 25% of the population but 45% of online service consumption. They are more likely to use new technologies, are better oriented in the Internet space, are adapted to financial risks, and, most importantly, they tend to spend more compared to older generations. In addition, they demonstrate individual preferences and a desire to receive immediate service. In Kazakhstan, young people also account for a quarter of the population. However, unlike China, where there is a rapidly ageing population, in Kazakhstan, due to the active life of people born after 1995, the share of potentially active online service consumers will increase by almost one and a half times by 2030 (Sagintaeva and Aimurzina 2015).

Investments play a considerable role in the field of fintech. No start-up can be launched without investment (Figure 1).

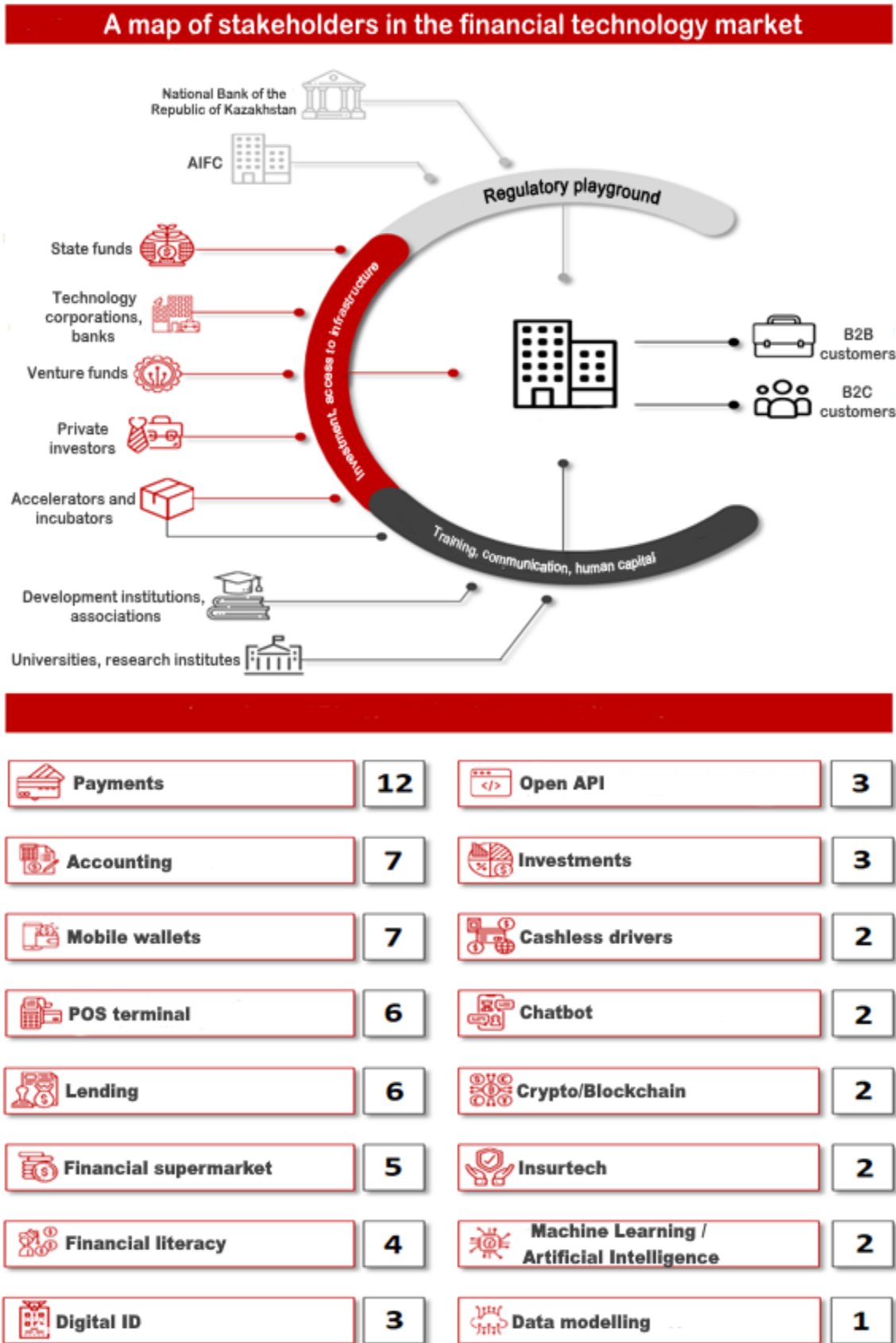


Figure 1. Investments

Source: adapted from Akhmetova et al. 2021.

Investments can be both internal and external. External investments are of great importance, and therefore investors must be attracted by favourable conditions and prospects. The volume of investments in fintech in Kazakhstan is still insufficient, and there is also a shortage of qualified fintech specialists. Fintech companies primarily begin as fintech start-ups, with an entrepreneurial spirit. There are issues with personnel in the field of fintech and entrepreneurship, and these issues must be solved. It is necessary to encourage people to become finance and IT technology specialists. Thus, it is necessary to expand the capabilities of universities by increasing the number of faculties, departments, teachers, and student groups on financial technologies (Brummer 2018).

In 2020, Kazakhstan introduced a general declaration which stimulated the growth of fintech in the country as the COVID-19 pandemic took hold. There is a lot of cash and many cash payments in the country. However, the declaration led to a reduction. It popularised online payments and non-cash payments, and a growing number of people now use non-cash payments (Figure 2). Promising areas of fintech include nano- and micro-lending, which is developing due to the numerous pawnshops, but even more so because of the online segment (Baidybekova 2019).

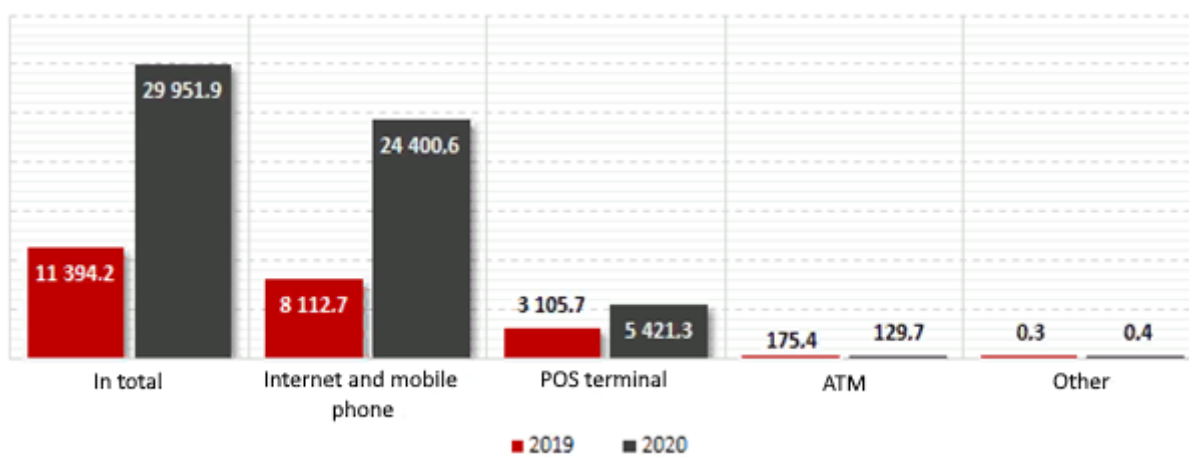


Figure 2. The volume of non-cash payments by transaction type

Source: adapted from Akhmetova et al. 2021.

The Internet is highly accessible; thus, there is a good basis for developing online businesses. However, although Internet availability is not a problem area, it requires further improvement. As mentioned, Internet sales account for only 3% of retail sales (compared to 12.6% in China). Thus, the level of e-commerce can also be considered an area that requires improvement. Therefore, it is essential to establish ways to motivate the population to use online commerce (Akhmetova et al. 2021).

Forecasting fintech development in Kazakhstan is based on identifying related issues and the opportunities for solving them. There are great opportunities for fintech development in the country. The favourable socio-demographic state and the spread of the In-

ternet and smartphones will contribute to the increasing yet relatively low level of online commerce in the country (compared to China). However, by 2030, it will have reached a high level, comparable to China (Baymuldin and Shaugumbekova 2021).

The consumer credit sector has internal and external issues. Internal problems should be solved by improving the loan portfolio for consumers in banks and improving the economy and the currency. External problems include the global demand for oil and gas, the course, and the global imbalance of supply and demand for oil. A key component of the Kazakh economy is the production and sale of oil and gas, and the average wages in the country and the stability of the national currency depend on it. One way to reduce this dependence on oil and gas revenues is the development of the “green” economy, in particular, the digital economy. This is the most powerful incentive in developing financial technologies, including fintech start-ups. Such start-ups are created by active and determined youth, which Kazakhstan has a great number of (Alam, Gupta, and Zamani 2018).

China has become an international leader in fintech development, and numerous start-ups are flourishing. China’s experience in developing fintech has become an example for other Asian countries. Globally, it is a leader in financial technologies, and in 2016, it surpassed the United States in terms of investment in financial technologies (more than \$10 billion). Of the 27 largest fintech companies in the world, eight are based in China with an estimated value of more than \$1 billion (Amstad et al. 2020). In numerous scientific publications, China occupies the most important place in developing modern financial technologies. Moreover, for Asian countries, which have a high proportion of young people in the population, China is the fintech gold standard (Goldfinch 2018; Akhmetova et al. 2021), although Kazakhstan is ahead of China in some aspects.

The network readiness index, which is calculated by international economic organisations, ranks Kazakhstan 36th in the world, with China in 52nd place. In the post-Soviet space, Kazakhstan is the leader in the number of smartphone owners. Of all mobile communication users in the country, 85% have smartphones. Thus, from the Internet accessibility standpoint, Kazakhstan has created a good basis for the development of online business and financial technologies (Baymuldin and Shaugumbekova 2021).

A country the size of Kazakhstan needs good connections. In the past, the most demanded connection was telephone communication and the availability of telephones. Nowadays, connections are primarily established via the Internet and social networks due to the active use of smartphones and laptops by the vast majority of people. Their everyday use and number play a large role in the development of the fintech services market. Indicators, including country size, the share of young people in the population, Internet prevalence, and the number and spread of smartphones and laptops, were con-

sidered by Schueffel (2019) and Rubini (2020). In their research, the leaders are the United States and China.

Young people represent the future development of financial technologies. They are more actively involved in online trading. In Kazakhstan, consumers are not active enough in online trading because they distrust online purchases, and other complex financial transactions have not yet gained popularity due to sceptical attitudes towards online trading. Financial literacy must be constantly developed as it is necessary to overcome the negative perception of digital services and financial technologies. The leader in the spread of online commerce will be young people. Many Asian countries have an advantage thanks to the high birth rate, as the proportion of young people is higher than in other countries (Arslanian and Fischer 2020).

The development of financial technologies in Kazakhstan faces various issues. According to a Statistics Committee survey, only 18.1% of consumers purchase online (Ziyabekov, Akindeev, and Yakushev 2019). When buying online, consumers prefer to use cash. Approximately 39.2% of respondents pay in cash upon receipt of the goods, while 18.1% use mobile payments (Ziyabekov, Akindeev, and Yakushev 2019). However, the country's banks remain insufficiently active in expanding favourable lending opportunities. Consumers need more profitable loan portfolios. Profitable loan portfolios would create favourable conditions for the development of the fintech credit sector. By focusing on the non-covered segment, e.g., borrowers without official income or with poor credit scores, online lenders complement conventional banks (Madir 2019).

King (2020) and Mills (2020) considered the current and future importance of fintech in various countries, while Liermann and Stegmann (2020) attached great importance to online lending. Fintech in Kazakhstan focuses mainly on online lending services, although services such as payments, transfers, and electronic money also play big roles. Electronic money is gaining popularity. For example, in 2016, the number of e-transactions increased 2.7 times to 43.3 million, while the volume increased 3.5 times to 154.2 billion tenges. In 2016, consumers had 5.9 million electronic wallets (compared to 2.9 million in 2015). In 2016, 63 companies worked in 10 segments of Kazakh fintech. The main spheres were payments and transfers, with 26 companies, as well as 15 micro-credit companies. In 2020, the government restricted microcredit by law. Therefore, the number of micro-credit companies decreased. Nevertheless, micro-lending and nano-lending remain attractive for companies and investors (Baidybekova 2019).

According to Akhmetova et al. (2021), the size of the financial technology market in 2021 had a potential estimated at 35 billion tenges, and the forecasted growth for 2022 was 22%. Companies in the fintech sector are approximately nine years old, on average. Almost 1,600 people are employed in one medium-sized company, while 50 employees work in small companies. The number of B2C clients is approximate-

ly 88,000, and the number of B2B clients is about 1000. Baymuldin and Shaugumbekova (2021) assessed the index of optimism about the state of financial technologies in Kazakhstan quite highly. This indicator is approaching 0.7. They also assessed the prospects for fintech development highly, at slightly more than 0.6. One observation in the study is that there are virtually no companies in Kazakhstan in which capitalisation reaches \$1 billion.

In research conducted by Akhmetova et al. (2021), respondents were asked to assess the relevance of financial technology trends in Kazakhstan for the future 1–3 years. A conditional rating of prospects was then established on a scale from 0 to 4, where 0 is irrelevant, and 4 is very relevant. Leading areas included digital banks (3.9), lending, including online and point-of-sale loans in real-time (3.4), and electronic purchases (3.3). Other areas in the rating were ranked as follows: loyalty (cashback service, advertising platform) – 3.1; marketplace – 3.1; infrastructure solutions (bank chatbots and robo-advising) – 3.0; management accounting (online accounting, online reporting, integrated solutions) – 2.8; investments (crowdfunding and P2P lending) – 2.7; insurance (insurance telematics, crowdsurance) – 2.3.

According to Baymuldin and Shaugumbekova (2021), the digital penetration from 2016 to 2021 equals 0.21, which indicates that the general perception of online loans is just above neutral. The largest share of users with a positive perception is in the capital of the country, Nur-Sultan (0.55). Women's attitudes were 2.2 times more optimistic than men's: 0.33 versus 0.15. Respondents aged 25 to 44 also had a more positive attitude to online lending: the key index is 0.35, and older people have a less positive attitude to online lending. Therefore, for members of the older age group (45+), the key index is 0.24.

Akhmetova et al. (2021) identified five factors that hinder the development of financial technologies. These include information risks (on a scale from 0 to 4) – 3.9, imperfection of national management and regulation of the industry – 3.6, currency instability – 3.3, shortcomings in the protection of personal data – 3.2, and insufficient attractiveness of Kazakh financial technologies for foreign investors – 3.1.

According to Baymuldin and Shaugumbekova (2021), specialists in Kazakhstan frequently solve issues related to the internal state of financial technologies in the country. In another study, Akhmetova et al. (2021) provided a qualitative rating of the strategic development of financial and technological companies. The highest in terms of attractiveness are strategic services for expanding the range of goods and services offered (on a scale from 0 to 1 – 0.96, and cost reduction – 0.94). In Kazakhstan, there is a necessity to optimise working capital (0.86) and a desire to revise this operating model. This study highlights the interest of businesses in finding the most optimal model for fintech development in the current unstable economic situation in the national market.

According to Kuruchbekova (2018) and Ziyabekov, Akindeev, and Yakushev (2019), Kazakh fintech companies have an optimistic view of the current state of fintech development in the country, as well as high hopes and various ideas about the prospects for this development. The majority of respondents (85%) were optimistic. Ninety-five per cent of participants were confident that development would improve considerably by 2022. At the time of the research, they assessed the prospects for developing their company with 0.85. Based on the respondents' answers, digital banks and lending are among the few promising fintech areas.

As noted by Akhmetova et al. (2021), the fintech market in Kazakhstan is in its infancy. Kazakhstan is interested in attracting foreign investment, so various laws are being passed to stimulate and regulate the venture capital and online lending markets. The development of the Internet, the active use of smartphones among a great share of the population, and the large proportion of young people are advantages that will help the country develop financial technologies. Problems are caused by fundamental factors and lie in the mentality of the population, e.g., a deep distrust of everything official, state bodies, banks, and companies engaged in financial services. The financial literacy of the population is forecast to increase. However, this requires time, renewal of the population of Kazakhstan, and the development of companies engaged in financial services.

Conclusions

In Kazakhstan, relevant issues related to fintech include the lack of investment and start-ups. Start-ups cannot be initiated without investments. Foreign investments are in demand and can be attracted by favourable conditions and prospects, while close neighbour China can considerably influence the state of the country. China is a key trading partner, and it is necessary to attract Chinese investors to the fintech services market. To do this, based on the forecast of overcoming fintech issues, the state and companies need to create attractive conditions and prospects for investors. E-commerce and digital services are the future of the economy.

The progress of fintech in Kazakhstan is associated with the introduction of the general declaration in 2020. Cash payments, which are used in large quantities, are one of the obstacles to developing fintech in the country. The general declaration is an important reason for reducing cash payments and increasing online, non-cash payments. A growing number of people have been using non-cash payments since 2020. Thus, as forecasted, the introduction of the universal declaration has become a tool for overcoming the issues of fintech development there.

Kazakhstanis are optimistic about the development of financial technologies in the country. However, to solve the issues associated with fintech development, it is necessary to con-

sider that the financial services market is still in its infancy. Based on the forecast, the main objective in overcoming the fintech development issues is to attract investment in fintech and create the largest possible number of fintech service start-ups.

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Analiza porównawcza zagadnień związanych z rozwojem technologii finansowych w Kazachstanie i w Chinach

Znaczenie rozwoju technologii finansowych (fintech) w Kazachstanie jest oczywiste ze względu na ich stale rosnącą rolę nie tylko tam, ale także na całym świecie. Ekspansja ta jest ściśle związana z postępowaniem handlu elektronicznego i reklamy, rozwojem technicznym, zmianami społeczno-demograficznymi i rozwojem społecznym. Artykuł identyfikuje problematyczne obszary rozwoju fintech w Kazachstanie i przedstawia praktyczne metody ich rozwiązywania. Główną metodą badawczą jest metoda strukturalno-analityczna, która łączy wszystkie obszary problemowe fintech w jednostki strukturalne i uwzględnia ich znaczenie. Zastosowano również metodę prognostyczną do przewidywania niektórych scenariuszy rozwoju fintech w Kazachstanie. Praktyczne metody rozwiązywania problemów związanych z rozwojem fintech można scharakteryzować jako metodologiczne, analityczne, informacyjne, skuteczne i predykcyjne. Komponent predykcyjny umożliwił określenie przeszkód w rozwoju fintech i sposoby osiągania wyników. Wyniki badań mają ogromne znaczenie ze względu na aktualność zagadnień fintech w Kazachstanie. Rozwój fintech w Kazachstanie, mimo pozytywnych perspektyw, napotyka na liczne przeszkody. Istotne będą działania na rzecz przewyciężenia problematycznych obszarów na ścieżce rozwoju technologii finansowych w Kazachstanie. Kazachstan ma szansę stać się liderem rozwoju start-upów z branży technologii finansowych.

Słowa kluczowe: technologia finansowa, e-commerce, pożyczki online, dynamika społeczno-demograficzna, usługi finansowe