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THE SPECIFICITY OF JAPAN'S CASHLESS PAYMENTS AND THE IMPACT OF THE COVID-19 PANDEMIC

In this paper, we have addressed the specificity of Japan's cashless payments in comparison to other economies, particularly countries from North-East Asia, and have considered the impact of COVID-19 pandemic. The specificity of Japan's cashless payments can be explained by both external and internal reasons. Our major finding is that COVID-19 pandemic has slightly triggered further development of cashless payments in Japan, however, numerous domestic factors still impede this process. Digitalization of the Japanese economy might positively affect further promotion of cashless payments.

Cashless payments, Japan, North-East Asia, COVID-19 pandemic

БЕЗНАЛИЧНЫЕ ПЛАТЕЖИ В ЯПОНИИ: ОСНОВНЫЕ ОСОБЕННОСТИ И ВЛИЯНИЕ ПАНДЕМИИ COVID-19

Рассмотрены основные особенности безналичных платежей в Японии в сравнении с другими странами Северо-Восточной Азии, а также проведена оценка влияния пандемии новой коронавирусной инфекции (COVID-19) на увеличение доли безналичных расчётов в общей структуре платежей. Показано, что специфика безналичных платежей в Японии обусловлена совокупностью внешних и внутренних факторов. Сделан вывод, что несмотря на то, что в период пандемии наметились тенденции более активного использования различных инструментов безналичных платежей, внутренние факторы по-прежнему выступают сдерживающей силой, препятствующей их более широкому использованию населением. Полномасштабная цифровизация экономики Японии может переломить данную ситуацию.

Безналичные платежи, Япония, Северо-Восточная Азия, пандемия COVID-19

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Introduction

According to the *Digital Payments Market Report*, the transaction value for the global digital payments market in 2020 was estimated at USD 5.44 trillion and it is projected to be worth USD 11.29 trillion by 2026. The global nature of COVID-19 pandemic and its impact on e-commerce both for large and small and medium enterprises (SMEs) is highly likely to spur the increase of digital payments across various economies. The demand for cashless payments, driven by global trends in international payment markets, favorable government policies and evolving consumer behavior, was relatively strong even before the pandemic. In many countries, governments aimed to reduce costs of printing the currencies, tackle the problem of fake currencies' circulation and simultaneously reduce illicit flows of cash that significantly hinder economic growth. Furthermore, digitalization of the world economy helped boost cashless and digital payments. The rapid rise in smartphone penetration among emerging economies, primarily in the Asia-Pacific region, is expected to positively affect the digital payment market growth¹.

COVID-19 pandemic is expected to positively impact cashless payments in Japan, which has traditionally been described as an extreme *late-mover* in the promotion of cashless payments in the Asia-Pacific region and worldwide despite the persistent government initiatives to increase Japan's low *cashless ratio*². According to an online survey conducted in July 2020 by G-Plan Inc. and Biglobe Inc., 29.5 percent of 7,865 respondents have been using cashless more frequently since April 2020. The data of the Internal Affairs and Communications Ministry also confirms that the ratio of households comprised of at least two people using online shopping has exceeded 50 percent in 2020³.

The above-mentioned data is rather surprising, considering that previous research has clearly demonstrated the low level of cashless payments in Japan⁴ and examined different reasons explaining this phenomenon [6; 11; 12]. While the expansion of e-commerce is a global on-going trend, a few studies point out that in Japan the development of e-commerce is mainly attributable to the customers who had already been using online shopping services before the pandemic and that the share of new users who can potentially contribute to the promotion of cashless payments is not large and is mostly represented by younger population [10]. Thus, the country's fast-ageing population is still resisting this change.

The purpose of this paper is to demonstrate the specificity of Japan's cashless payments in comparison to other economies, particularly countries from North-East Asia. The specificity of Japan's cashless payments can be explained by both external and internal reasons. The former includes low level of adaptation to global trends in international payment markets such as its low level of interoperability with cashless payment instruments of other foreign countries and insufficient development of touchless technology. The latter is mostly attributable to domestic factors accountable for Japan's low cashless ratio which we have summarized into groups of country-, domestic financial market-, business-, consumer- and culture-related factors. Our major argument is that COVID-19 pandemic has boosted further development of cashless payments in Japan, however, numerous internal and external factors are still accountable for Japan's low cashless ratio.

¹ Digital Payment Market Size and Share Report, 2021–2028. Available at: <https://www.grandviewresearch.com/industry-analysis/digital-payment-solutions-market> (accessed 26 September 2021).

² Author's note: Cashless ratio is defined as the ratio of cashless payments by debit, credit card and e-money in the final household consumption. Conventionally, cashless ratio is utilized to measure the spread of cashless transactions value in an economy.

³ Nagata K. Pandemic Gives Extra Momentum to Cashless Drive in Japan. Available at: <https://www.japantimes.co.jp/news/2021/02/22/business/cashless-payments-coronavirus/> (accessed 26 September 2021).

⁴ Amamiya M. Should the Bank of Japan Issue a Digital Currency? Available at: <https://cointhinktank.com/upload/Should%20the%20Bank%20of%20Japan%20Issue%20a%20Digital%20Currency.pdf> (accessed 26 September 2021); [1; 3; 4].

The methodology of this research is based on the calculation of cashless ratios for Japan and other North-East Asian economies and detailed examination of cashless payment instruments, using the data of the Bank of International Settlements (BIS). Simple regression analysis implemented has confirmed the distinctive path of Japan's cashless ratio in comparison to other North-East Asian economies. Surveys of the Bank of Japan and other statistical data were utilized to identify various reasons accountable for the low level of cashless ratio.

The remainder of this paper is as follows. In Section 2, we outline major global trends in international payment markets and conclude that Japan has been slowly adapting to these changes. In Section 3, an overview of cashless payments in Japan in comparison to other North-East Asian countries is analyzed. In Section 4, we analyze domestic factors accountable for the low level of cashless ratio in Japan into groups of national, cultural, domestic financial market-, business- and consumer-related factors. In Section 5, we draw major conclusions and consider the impact of COVID-19 pandemic on cashless payments in Japan.

Global Trends in International Payment Markets

International payment markets are going through significant changes caused by the digital transformation (DX). Contemporary major trends in the international payment markets include the following.

First, there are significant changes in consumer's behavior caused by transformations in the payment instruments. Payment systems remain one of the most popular spheres for fintech adaptation. Transformations in this sphere shape consumer's behavior in a sense that consumers tend to demand new, online, speedy, secure and convenient payment services capable of instantaneously processing larger transaction volumes. According to Ernst & Young, the average Global FinTech Adaptation Index in 2015–2019 have increased by a factor of four and amounted to 65 percent¹. Adaptation of fintech is particularly pronounced in emerging and developing economies, while in Japan the index remains one of the lowest. Thus, Japan is slowly adapting to fintech and new types of payment instruments in comparison to other countries.

Second, new payment technologies are rapidly emerging: touchless payments, biometrics, introducing carrying payment devices such as payment bracelets, Apple watches and other technologies introduced by smart-devices, all these technological developments have become a new reality. In addition, payments via messaging systems, such as WhatsApp, Facebook Messenger, WeChat, and Line² who have large amounts of clients, are expected to burgeon. In Japan, touchless technology is still not available in the majority of credit and debit cards issued and this function is being added only recently³. Payments via messaging systems in Japan such as LinePay have also been introduced only in April 2019.

Third, new players have joined the payment markets, particularly from the corporate sector and non-banking organizations. These include global IT-firms (BigTech), such as Microsoft, Apple,

¹ Global FinTech Adoption Index in 2015–2019 for selective economies: China and India (87 percent each), Russia and South Africa (82 percent each), Colombia (76 percent) and Peru (75 percent), Hong Kong (China) and South Korea (67 percent each), Japan (34 percent). Source: Global FinTech Adoption Index 2019. Available at: https://www.ey.com/en_gl/ey-global-fintech-adoption-index (accessed 26 September 2021).

² Number of active users as of July 2021: WhatsApp – 2 billion; Facebook Messenger – 1.3 billion; Weixin / WeChat – 1.2 billion; Line – 167 million (incl. 84 million in Japan). Source: Global Social Networks Ranked by Number of Users 2021. Available at: <https://www.statista.com/statistics/272014/global-social-networks-ranked-by-number-of-users/> (accessed 26 September 2021).

³ Cashless shindankai, nihon ni syoujyun (A New Stage of Cashless Payments Technology is Introduced in Japan). Nikkei Shimbun [Nikkei Newspaper]. 2021. 30 July. P. 27. (In Japanese)

Amazon, Alphabet (Google), Facebook, Alibaba, and Tencent that possess both global client networks¹ and considerable financial resources crucial for the development of new payment instruments. The BigTech firms have already launched projects related to e-money, money transfer systems, internet-acquiring technologies, stablecoins² and others. There is a tendency to develop partnerships between the traditional financial institutions and BigTech companies: In 2018, 26 percent of financial institutions worldwide were already partnering with BigTech firms and 27 percent planned to establish such partnership in the short-term³. The market entry of BigTech firms into emerging and developing economies is particularly pronounced due to low levels of financial inclusion and it is enhancing due to the COVID-19 pandemic⁴. In Japan, BigTech firms such as Yahoo!Japan and Rakuten have also launched similar systems – PayPay and R Pay, respectively, which grow in popularity, however, are still lag behind other payment instruments in terms of transaction value.

Fourth, the demand for interoperability of different payment systems is growing as customers demand more convenient and speedy payment options both domestically and abroad. International standards, such as ISO 20022 promoting the universal exchange of electronic financial messages currently adopted in more than 60 countries, are being actively developed. In Japan, the so-called transportation IC (transit IC) prepaid cards and commercial prepaid cards are rather popular, however, they are not applicable at the international markets. In addition, credit, debit and prepaid cards issued by domestic Japanese brands do not support touchless (contactless) technology (*Fig. 1*).

Fifth, the competition on the payment market becomes an issue due to the dominant positions of a few market players. In China, two market players dominate the payments market – namely, Alibaba and Tencent [7; 9]. In Russia, there are versatile payment service providers, however, a few big firms dominate the market: for instance, 65 percent of all banking accounts are opened at state-owned Sber⁵. The Japanese case is the opposite, the number of cashless payments is extremely versatile where no major payment provider has a dominant market share and there is perfect competition, which, however, makes it more difficult for the consumers to understand all available payment instruments and the distinctions among them (*Fig. 1*).

Sixth, emerging new players on the payment markets are scrutinized by national regulating authorities. In many countries, the banking regulators aim to provide individuals and business with new payment opportunities by developing, for instance, the system of quick payments such as Target Instant Payment Settlement (TIPS) in the European Union or FedNow in the United States, modernizing the mobile infrastructure (India) and providing extensive support by establishing

¹ Number of clients (active users) of global BigTech and FinTech firms in millions: Google – 2,500; Facebook – 2,498; Apple – 1,000; Rakuten – 1,400; Tencent – 1,200; Alibaba – 798; Amazon – 300; Yahoo!Japan – 67. For comparison, in Russia the largest BigTech and FinTech firms in terms of clients (active users) are: Sber – 98; Mail.ru – 97; MTS – 106; Yandex – 80; VTB – 14; Tinkoff – 6. Sources: Leading Websites and Online Services in Japan 2018, by Monthly Active Users. Available at: <https://www.statista.com/statistics/1071192/japan-most-popular-websites-online-services-by-monthly-active-users> (accessed 12 October 2021); and National Payment System Development Strategy for 2021–2023. Available at: https://www.cbr.ru/Content/Document/File/120210/strategy_nps_2021-2023.pdf (accessed 12 October 2021). (In Russian)

² Author's note: Stablecoins are cryptocurrencies where the price is designed to be pegged to a cryptocurrency, fiat money, or to exchange-traded commodities such as precious metals or industrial metals.

³ Ruddenklau A. Tech Giants in Financial Services. Is Collaboration the Way Forward? Available at: <https://assets.kpmg/content/dam/kpmg/xx/pdf/2018/02/tech-giants-in-financial-services.pdf> (accessed 26 September 2021).

⁴ BigTech Firms in Finance in Emerging and Developing Economies. Market Developments and Potential Financial Stability Implications. Available at: <https://www.fsb.org/wp-content/uploads/P121020-1.pdf> (accessed 26 September 2021).

⁵ Author's note: The former name is Sberbank, which is the largest state-owned commercial bank. The name Sber was chosen to highlight the bank management's ambitions to reposition itself as a giant IT (FinTech) firm.

regulatory sandbox systems (Singapore, Japan). Concentration of payment services in a handful of payment providers poses further risks for the competition in the industry, hence, many regulating agencies design policies to stimulate open banking (e. g., the United Kingdom).

Japan Cashless Map

2019

— = NFC Contactless (EMV/FeliCa)

Fig. 1. Japan's Cashless Payment Instruments in 2019

Note: The original image of the Japan Cashless Map is created by Crowd Cast, Ltd.

Source: Bassett J.B. Japan Cashless Map for 2019. Available at: <https://atadistance.net/2019/01/14/japan-cashless-map-for-2019> (accessed 26 September 2021).

In addition, to these trends governments in many countries have been examining the possibility to establish central bank digital currencies (CBDO) and Japan, China, South Korea and Russia are also actively moving in this direction.

An Overview of Cashless Payments in North-East Asia

Among the North-East Asian countries and other countries in the world, Japan the highest ratio of cash in circulation in GDP. In 2019, it amounted to 20.2 percent, followed by Russia (9.6 percent), China (8.6 percent) and South Korea (7.5 percent). Interestingly, the amount of cash issued by central banks has a tendency to increase despite the promotion of cashless payments in almost all countries, however, the Japanese case is rather unique: the growing amount of cash in circulation can be explained by the enhanced tendency of cash hoarding by households which prefer to keep financial assets at home rather than deposit them banks due to almost zero interest rates. On the opposite, the share of cashless value transactions in GDP for Japan is one of the lowest (14.8 percent), which is greatly surpassed by China (786.0 percent), Russia (59.1 percent) and South Korea (47.6 percent). In most countries, there is negative correlation between these two indicators (Fig. 2), however, this is not typical for Japan.

Fig. 2. Results of the Simple Regression Model, data for 2019, in percentage

Source: Compiled by author.

According to BIS, the volume of cashless transactions has increased in 2012–2019 for all the respective countries: In China, the increase was by 20 times and reached 313 billion transactions per year, and was followed by Russia (15 times, 45 billion) and South Korea (3.1 times, 31 billion). The data for Japan is not available in the database, but it is still possible to assume that the transaction volume of cashless payments in Japan showed positive dynamics but unlikely to surpass the growth level of other North-East Asian economies.

Similar trends are observed for cashless transactions value: Russia demonstrated the highest growth by 5.6 times (USD 1 trillion in 2019), followed by China (3.1 times; USD 113 trillion), South Korea (1.5 times, USD 784 billion) and Japan (1.4 times, USD 752 billion).

Cashless ratios for North-East Asian countries have been steadily growing in the respective period (**Fig. 3**). China has an outstanding result of 2,019.0 percent, followed by Russia (116.3 percent) and South Korea (98.1 percent). Cashless ratio of Japan remains incomparably low (26.9 percent), which is surprising considering the highest level of card issuance per inhabitant (**Table 1**). Thus, the penetration rate of plastic cards in Japan is high but their usage remains low.

There are observable differences in major cashless instruments utilized in the respective countries (**Fig. 4**). In Russia, debit cards account for almost 95 percent of all cashless transactions value, however, credit cards are more prevalent in South Korea (78.6 percent) and Japan (89 percent). Japan has the highest share of e-money (8.5 percent). The data for China is not available in *BIS* statistics, however, previous research has shown that in China mobile and QR payments are the most widely used payment method. These payments are supported by two dominant market players such as WeChat and Alipay [9].

Japan has the largest share of e-money in Asia which is currently rapidly expanding. E-money in Japan is defined as stored value or a multiple-purpose pre-paid electronic payment instrument. Bank of Japan distinguishes between prepaid and postpaid e-money; however, prepaid instruments prevail on the market.

Fig. 3. Cashless Ratio in 2012–2019 for Selective Countries, in percentage

Note: The data for China is on the right axis.

Source: Calculated and compiled by author from BIS statistics. Payments and Financial Market Infrastructures. Available at: <https://stats.bis.org/statx/toc/CPMI.html> (accessed 26 September 2021).

Table 1

The Number of Cards and ATMs per Inhabitant in 2019

Country	Total	With a cash function	With a debit function	With a credit function	With an e-money function	Number of ATMs per 1,000 inhabitants
Japan	12.15	2.68	3.59	2.32	3.56	1.08
China	6.02	6.02	5.49	0.53	...	0.78
South Korea	6.09	...	3.21	2.15	0.73	2.30
Russia	3.76	1.98	1.72	0.26	1.28	1.99

Source: Compiled by author from BIS statistics. Payments and Financial Market Infrastructures. Available at: <https://stats.bis.org/statx/toc/CPMI.html> (accessed 26 September 2021).

Fig. 4. Cashless Payments by Instrument in 2019, in percentage

Source: Calculated and compiled by author from BIS statistics. Payments and Financial Market Infrastructures. Available at: <https://stats.bis.org/statx/toc/CPMI.html> (accessed 26 September 2021).

Table 2

Shares of Cashless Payment Instruments in 2017–2019, in percentage

Payment Instrument	Share in Total Cashless Payments			Growth Rate	
	2017	2018	2019	2018	2019
Debit Card	1.7	1.8	2.1	18.4	28.2
Credit Card	90.2	90.5	89.7	14.2	10.1
E-money	8.0	7.4	7.0	5.4	5.0
QR-code	...	0.2	1.2	...	512.5
Total Cashless Payments				13.9	11.1

Source: Ippan shyadan houjin kyashulesu suishin kyoigikai (General Incorporated Association on the Promotion of Cashless Payments). Kyashulesu Rodo Mappu 2021 [Cashless Road Map 2021]. Available at: <https://www.paymentsjapan.or.jp/wordpress/wp-content/uploads/2021/05/roadmap2021.pdf> (accessed 26 September 2021). (In Japanese)

The most widely-used e-money in Japan are Rakuten Edy (established in 2001), Suica (2004), PASMO (2007), Nanaco (2007) and WAON (2007). Many credit and debit cards are issued with the e-money function [5]. The market of e-money is maturing, while there are no dominant players with the largest shares, thus the trend towards market concentration is still on-going. In terms of growth rates, QR-code payments have burgeoned in recent years following the spread of applications that can be used on smartphones: In 2018–2019, the growth rate amounted to 512.5 percent, however, QR-code payments had the lowest transaction value (*Table 2*) due to its primarily usage for small-scale payments [2].

Domestic Factors Explaining Why Japan is Lagging Behind in Cashless Payments

In 2018, the Ministry of Economy, Trade and Industry (METI) adopted the *Cashless Vision*, in which Japan aimed to increase cashless ratio to 40 percent by 2025 with the future goal of 80 percent. In 2019, the Japanese government has introduced massive government-backed promotion campaigns for the society to embrace cashless payment options following the 2019 consumption tax hikes. However, international comparisons show there is slow progress for Japan to go entirely cashless which can be explained by the following domestic factors.

First, the country-specific factors, which are based on the idea that it is relatively safe to use cash in Japan even for large-volume transactions as Japan has one of the lowest crime rates in the world: The Crime Index for Japan in 2021 was 21.7 percent, which is the second lowest after Taiwan (Province of China) (15.3 percent). This, however, does not fully explain the consumers' preference to use cash in Japan, as South Korea also has relatively low crime levels (*Fig. 5*) but maintains high cash ratio. In addition, most of the public services in the country are still not provided in digital form and it is not widespread to offer cashless payment options by most of the municipalities in Japan, however, this has been gradually changing.

Financial market-specific factors are reflected in the structure of the banking industry and cashless payment providers in Japan. Japanese banking system has many 'legacy costs' [3] such as abundant number of office workers and difficulties in restructuring them due to the development of the main-bank system in the country and extensive network of ATMs (*Table 1*), which makes it easier and convenient for consumers to withdraw cash. The data for ATM networks per

1,000 inhabitants is higher in case of South Korea and Russia. In addition, banks and banking providers have only recently launched cashless payment options and touchless payment technology in Japan, which proves the fact that transition towards internet banking and mobile banking is slow. Banks are *late-movers*, and they are struggling to compete with numerous other cashless payment instruments available on the market (*Fig. 1*).

Fig. 5. Crime Index in 2021 for Selective Countries, in percentage

Source: Compiled by the author with references to Crime Rate by Country 2021. Available at: <https://worldpopulationreview.com/country-rankings/crime-rate-by-country> (accessed 26 September 2021).

The impacts of cashless payments for business are also diverse. Large companies such as home electronics suppliers or department stores have lower risks and are capable to cover installation costs and settlement fees (commissions) for using the cashless providers' technology, while for many SMEs and individual business owners, the burden of handling cashless transactions is much larger due to the necessity of having larger proportions of working capital and cash flow ratios. Advantages for business to promote cashless payments include resolving the problem of labor force shortages and the opportunity to collect big data such as purchase history which can be analyzed and utilized for the improvement of economic and financial performance.

The consumer-specific factors have crucial impact on Japan's low cashless ratio. The research study conducted by Navi Navi Insurance Inc. during January 6–12, 2021, 560 people¹, has found that 64.5 percent of respondents used cashless payment online and offline, with the majority of them utilizing credit cards. Twenty-five percent of respondents also reported that they had plans to go entirely cashless in the future.

However, many Japanese prefer to use cash due to security and privacy concerns, low levels of financial literacy as well as due to the digital divide between the younger and elder groups of population. Among the reasons not to switch to cashless, the respondents in the above-mentioned survey expressed concerns regarding the security and management of cashless transactions, possibility of debt accumulation, difficulties of keeping records of personal expenditures. The Bank of Japan conducted similar survey in 2019, where respondents reported that they prefer cash due to the following reasons: cash allows settlement finality (73.7 percent), many stores accept cash payment

¹ Kashulesu ha V.S. genkin ha 2021 nen no riyoritsu ha dou natteiru (Cashless vs. Cash. Rations for 2021). Available at: <https://www.navinavi-hoken.com/articles/cashless-or-cash> (accessed 26 September 2021). (In Japanese)

(63.8 percent), using cash prevents the risk of overspending (49.0 percent), avoiding settlement fees (37.8 percent), cash transactions are quicker (22.8 percent) and others¹. Interestingly, due to the closer nature of human relationship particularly in rural areas, Japanese consumers may avoid forcing the local stores to pay settlement fees.

Consumers' behavior is gradually changing driven by e-commerce, the spread of digitalization as well as the COVID-19 pandemic. In 2019, the Central Council for Financial Services Information of the Bank of Japan published *Financial Literacy Survey*², in which 66.4 percent of respondents reported that they used cashless instrument once a month with the most frequent payment instrument being credit cards (32 percent) followed by e-money (20.3 percent) (*Table 3*). Among the reasons that would encourage a shift to cashless payments the respondents mentioned economic benefits such as point and reward systems (41.0 percent), access to cashless payments in many places (23.3 percent), and stronger protection of personal information (18.5 percent).

Table 3

Frequency of Using Cash and Cashless Payment Instruments in 2019,
in percentage of the total respondents*

Payment Instrument	Almost every day	Once a week	Once a month	Hardly ever / Never	Do not have any
Credit Card	10.2	31.5	32.0	10.0	16.2
Debit Card	0.9	2.4	4.6	20.0	72.1
E-money	10.3	25.5	20.3	15.8	28.1
Smartphone	2.1	5.9	9.5	31.5	51.0
Cash	48.6	36.5	7.5	2.8	4.6

Note: * – 25,000 respondents aged 18 to 79 throughout Japan.

Source: Compiled by the author with references to Central Council for Financial Services Information, Bank of Japan. Financial Literacy Survey: 2019 Results. Available at: <https://www.shiruporuto.jp/e/survey/kinyulite/pdf/19kinyulite.pdf> (accessed 26 September 2021).

Finally, in Japan the cultural factors are also accountable for slow changes in consumer behavior. Cash is deeply rooted in the Japanese culture and national customs and habits: Coins are utilized to do offering in shrines³ and children receive cash in the form of *otoshidama* for the New Year. Cash is also offered at weddings and funerals and such offerings are wrapped in special paper envelopes such as *noshibukuro* or *putibukuro* and often carried in Japanese textile wallets called *fukusa*. It is not common practice to take notes or excessively fold paper money in Japan, and the elder generation has traditionally taught younger generations to sort paper money in their wallets according to their nominal value. Considering large proportion of elder generation in Japan's population, it is evident that these customs and habits are still deeply rooted in the Japanese society and thus are useful in understanding the reasons why Japan is keen on cash.

¹ Fukumoto Y. Is Japan Reluctant to Shift to a Cashless Society? Current Situation and Outlook. Available at: <https://fpcj.jp/wp/wp-content/uploads/2019/05/79c308a60de7c55f96259d304d238a6b.pdf> (accessed 26 September 2021).

² Central Council for Financial Services Information, Bank of Japan. Financial Literacy Survey: 2019 Results. Available at: <https://www.shiruporuto.jp/e/survey/kinyulite/pdf/19kinyulite.pdf> (accessed 26 September 2021).

³ Author's note: Different coins are utilized for offerings in shrines. The five-yen coin (*go en*) is the most suitable as an offering as there is a word with similar pronunciation *goen* meaning good relationship or establishing good contacts and encounters.

Conclusions

This paper presented an overview of cashless payments in Japan in the context of digitalization and transformations in international payment markets. International comparisons have shown that cashless payments in Japan are significantly lagging behind other developed and developing economies.

The macro-analysis of cashless payments has demonstrated that Japan has one of the highest levels of cash circulation in its economy while its cashless ratio remains one of the lowest. Evidently, one should be also careful with these estimates as there are studies that show that in Japan a large proportion of payments for utility payments (rent, electricity, gas, mobile bills) are handled by automatic withdrawals from customers' accounts, consequently, they are not included in the cashless ratio formula for Japan but are counted for other countries where households pay for similar public services using cashless payment instruments [3].

Credit cards remain the main payment instrument in Japan, however, in recent years e-money and QR-codes have expanded. E-money technology is mostly based on transit IC prepaid cards which are widespread in Japan but cannot be easily utilized abroad or by foreigners visiting Japan. In addition, Japanese credit cards have only recently started to support touchless technology which is already spread worldwide. Thus, in a sense, Japanese cashless payments market is one of the so-called closed type (domestic market-oriented) and further exposure to the impacts of global trends in international payment markets is highly desirable.

The specificity of Japan's cashless payments can be explained by both external and internal reasons. The former includes low level of adaptation to global trends in international payment markets such as Japan's low level of interoperability with cashless payment instruments of other foreign countries and insufficient development of touchless technology. The latter is mostly attributable to domestic factors accountable for Japan's low cashless ratio which we have summarized into groups of national, cultural, domestic financial market-, business-, consumer-related factors. These versatile group of factors altogether are accountable for the low cashless ratio, and they should be addressed when designing relevant government policies.

The government has been already designing different policy instruments to stimulate cashless payments. The policy in this sphere is inclusive as government officials, business and academic societies participate in policy discussions. In addition, the policy is established in the form of a regulatory sandbox which provides companies with more freedom when designing new products and solutions. The government also aims to enhance financial literacy of the population by distributing brochures about the benefits of cashless payments for different age groups of the population as well as for business.

On 1 September 2011, the Digital Agency was newly established for the purpose of effective coordination of digitalization among separate government agencies. However, overall, the government is not forcing cashless economy on the society which is the case in many other countries [8], including those from North-East Asia. This can be positively evaluated as a sign of high level of free market development and democratic practices in the country, but it simultaneously hinders development opportunities for the Japanese economy and further distances it from the world trends.

Finally, COVID-19 pandemic has slightly expanded cashless payments in Japan. The stay-at-home trend has boosted demand for online shopping and in addition local governments in Japan have gradually started to switch from cash to cashless transactions for the provision of public services in order to mitigate the risk of infection¹. However, numerous domestic factors highlighted in this research still impede this process. Moreover, there is evidence suggesting that the pandemic has

¹ Nagata K. Pandemic Gives Extra Momentum to Cashless Drive in Japan. Available at: <https://www.japantimes.co.jp/news/2021/02/22/business/cashless-payments-coronavirus/> (accessed 26 September 2021).

stimulated the expansion of cashless payments by consumers who have already been using the technology, while the increase in the number of new users of cashless payments was rather moderate – thus, online consumption is expected to fall after COVID-19 pandemic subsidies and this may lead to a declining trend in cashless payments [10].

Overall, further prospects for Japan in promoting cashless payments will depend on detailed tackling of both external and internal factors. COVID-19 pandemic will slightly boost the shift towards cashless payments; however, mass-scale digitalization of the Japanese economy might have a larger effect on speeding up this process.

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