

Digitalization of Payment Instruments: Cashless Payments and Loyalty Points Systems



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1 Introduction

Cash is still the most preferred means of payment in Japan. In fact, the ratio of cashless payments was relatively low until recent years. On the other hand, Japanese people have a strong affinity for loyalty points. The loyalty point system is a mechanism that allows users to receive a discount when they shop at the same store in the future. Platform companies like Softbank (Yahoo!) are actively using these systems to quickly acquire customers who use cashless means such as PayPay by increasing the point reward rate when shopping at their member stores. This is one reason that the ratio of cashless consumer spending has been rising in recent years. Loyalty points are also used to make payments as if they were the corporate currencies among the platform companies' member stores and customers.

This chapter aims to calculate the cashless ratio of Japanese consumption expenditure using the questionnaire survey introduced in Sect. 2, and analyze the characteristics of cashless payments in Japan by annual household income, region and age, and other characteristics. Next, Sect. 3 examines the characteristics of loyalty points and their similarity to money. Finally, we describe the future outlook for cashless payments in Japan.

This chapter revises, updates, and integrates two former articles published by the author in Japanese: Okina (2019a, b).

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2 Cashless Payments in Japan: Current Situation and Prospects

2.1 Why is Japan Encouraging Cashless Payments?

The Japanese government is promoting cashless payments as a growth strategy. There are three reasons for this. First, cashless transactions make life more convenient for consumers and stimulate consumption. For example, public transportation is much easier to use with prepaid transportation cards; tourists spend more when they have payment options other than cash. Second, cashless transactions lead to improved productivity in small and medium enterprises. For understaffed small and mid-sized restaurants and stores, closing the cash register is a labor- and time-intensive task. Cashless payments can ease some of that burden. Finally, cashless payments yield data about the purchase history of individuals that is increasingly leveraged by a range of promising services. Overseas e-commerce platforms like Amazon and Alibaba actively collect “big data” about the online purchases and behavior of individual customers. They then analyze that data and use it to provide shoppers with customized and convenient services.

2.2 Government Indicators and the Current State of the Cashless Economy

In its *Investments for the Future Strategy* document, the Japanese government outlined plans to double the percentage of cashless payments from the current 20–40% by 2025 (Prime Minister’s Office of Japan, 2017). This 20% includes only credit cards, debit cards, and e-money, and is calculated using total household spending as the denominator. The government prefers this calculation method because it results in a number that can be used for international comparisons. Based on this number alone, however, Japan ranks second to last among advanced countries in the use of cashless payment methods, ahead of only Germany (Ministry of Economy, Trade and Industry [METI], 2018).

The Ministry of Economy, Trade and Industry has always highlighted four issues with the 20% estimate (METI, 2018). The first issue is that the denominator includes imputed rent of homes. Second, the 20% figure does not include transfers of money between bank accounts. Third, it also does not include services that use smartphone apps to facilitate transactions. Fourth, the figure includes the use of corporate credit cards.

To make a more accurate assessment of the current state of the cashless economy in Japan, we conducted a questionnaire survey of 3000 individuals in August 2018. The research was commissioned by the Nippon Institute for Research Advancement (NIRA). We collected responses until we achieved ratios of participants that matched

Table 1 Percentage of cashless payments by payment method

Percentage of cashless payments	51.8
Credit cards	31.4
Direct debit	10.5
Prepaid e-money	5.0
Online banking	1.4
Cash card transfers	0.9
Debit cards	0.8
Smartphone apps	0.7
Others	1.1

Source NIRA (2018)

those in the Basic Residents Register in terms of gender, age, place of residence, and similar indicators. We divided the items in the National Survey of Family Income and Expenditure into 38 categories of goods and services, then asked our survey participants to report on their consumption of these goods and services and how they paid for them. Participants also reported characteristics such as employment status and household income. This survey found that about 50% of purchases made for private consumption were paid for using cashless methods (Table 1). The findings validate the four concerns mentioned above. These results cannot be compared to figures from other countries, so they do not provide definitive proof. However, in combination with the fact that Japan was a forerunner in the development of inter-bank remittance services for payment of tuition fees, electricity bills, and similar remittances, our results suggest that Japan may not be lagging behind other countries for cashless payments. In recent years, this number seems to have increased a little due to the spread of Smartphone payments, which are actively utilizing loyalty point redemption measures described hereafter.

2.3 Why Are Cashless Payments Slow to Gain Traction?

The survey revealed some other interesting trends. First, a closer look at the use of cashless payment methods by annual household income reveals that individuals with more disposable income make a higher percentage of payments using cashless methods (Fig. 1). A regression analysis of the results also reveals that individuals who are in regular employment and have a high educational background pay with credit cards more often. This suggests that the increase in cashless transactions in Japan is driven by individuals who enjoy a stable socio-economic position that allows for easy use of credit cards.

An analysis of the percentage of cashless payments by region revealed that residents of urban areas, such as the Tokyo metropolitan area, frequently pay cashless. The percentage of cashless payments is lower among residents of the Hokuriku

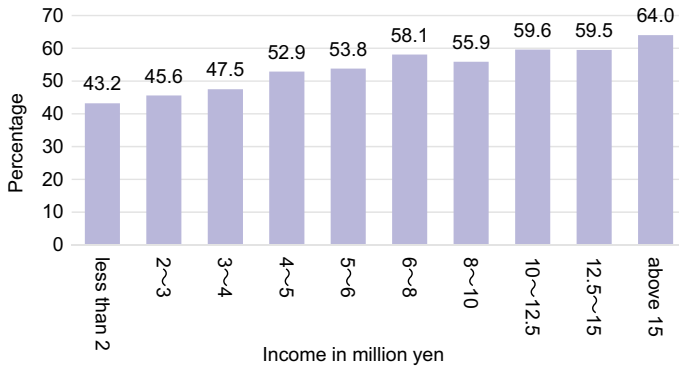


Fig. 1 Percentage of cashless payments by annual household income. *Source* NIRA (2018)

region, the island of Shikoku, and the Kinki region (except the Osaka, Kyoto, and Kobe metropolitan area). The results show that cashless payments in 2018 had become more prevalent in the Hokuriku region compared to those in 2015 (Fig. 2). This is most likely because of tourism-boosting measures such as the introduction of e-money and prepaid transportation cards. Such initiatives may have closed regional gaps in the use of cashless payment methods.

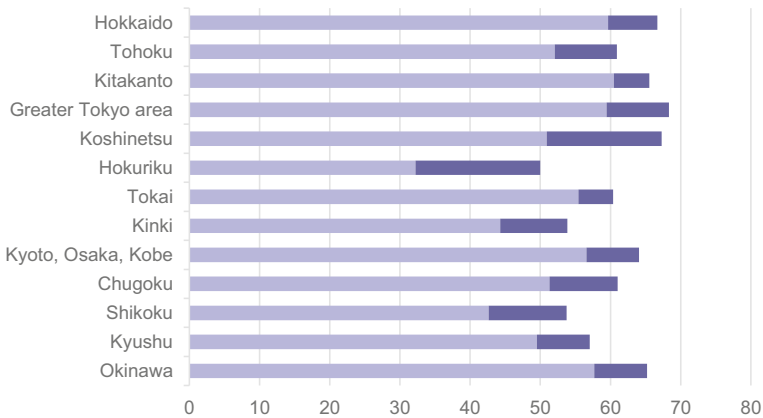


Fig. 2 Percentage of cashless payments by region in 2015 and 2018. *Note* The light and dark bars show the percentage of cashless payments in 2015 and in 2018, respectively. Visible parts of the dark bars show the percentage growth of cashless payments. *Source* NIRA (2018)

2.4 Japan Remains a Cash-Oriented Society

Table 2 shows which goods and services are often paid for in cash in Japan. Cash is still frequently used to facilitate exchanges of money between individuals, for example, for ceremonial occasions, remittances, pocket money and gifts to family members. Individuals also turn to cash to pay for public services, including postal services, nursing care and medical care.

Another notable result is that approximately 36% of individuals actively prefer to pay for daily goods and services in cash. This indicates that consumers still have a strong preference for cash, particularly those in lower income segments. When asked why they favor cash, many consumers reported security concerns related to credit cards. Many also voiced fears that credit cards would lead them to spend more than their income allows (Table 3). Resolving these concerns may increase the number of consumers comfortable with cashless payments.

Table 2 Consumption items frequently paid for in cash

Consumption item	Percentage	
1	Alms, expenses for ceremonial occasions	93.1
2	Postal and shipping costs	91.7
3	Remittances, pocket money, gifts to family	85.9
4	Hairdressing, perms, haircuts	78.8
5	Taxi fares	73.4
6	Medical and nursing care	71.5
7	Other services (housework, etc.)	66.1

Source NIRA (2018)

Table 3 Reasons for preferring cash to make payments (in %)

Reason	Percentage
I don't feel like I'm spending anything if I can't touch the money, so cashless payment methods make me overspend	57.2
I worry how secure cashless payments are	34.7
I don't need to make any cashless payments	27.8
I worry about loss or theft when the money is not in cash	13.9
Cashless options are difficult to use because I need to manage my balance and my passwords	13.2
Cashless payment procedures are cumbersome	8.7
I'm not often in situations where I can use payment methods other than cash	5.8
I want to use cashless payments but don't know how	2.2
I don't have a smartphone, computer, etc	0.8

Source NIRA (2018)

2.5 We Need to Understand How Consumers Use Cashless Payments

This analysis of the current state of the cashless economy and consumer sentiment toward cashless payments reveals that acceptance of cashless payment methods depends on income level, region of residence and type of employment. To further popularize cashless payments throughout Japan, the government needs to ensure that individuals experience cashless payment systems as both secure and convenient. This requires forming a clear picture of consumers' current use of cashless payment methods, including via banks and Fintech services. It also requires nurturing private businesses that can respond to consumer needs and alleviate consumer anxieties. Finally, the government must monitor the evolving situation on the ground at fixed intervals in order to realize the development of cashless services that meet users' needs, and enable as many people as possible to enjoy the benefits of cashless payments regardless of income or region.

2.6 Areas of Competition and Cooperation for Private Companies

The survey results presented above show that consumers largely eschew cashless payments when making personal remittances or paying for public services such as postal, municipal, medical and nursing services. On the other hand, a plethora of payment services have sprung up in Japan. From a user perspective, the lack of interoperability between these services is a serious issue.

In 2012, major banks in Sweden developed and released a small mobile service for interbank money transfers called Swish. Swish played a significant role in promoting the use of cashless payments in Sweden. Users of Swish can send small remittances, for free and instantaneously, simply by entering the receiving party's cell-phone number. Today, Swish has evolved into a highly interoperable network for small remittances that is used by some 70% of Swedes. The banking community is adding value to the service by enabling use of Swish in e-commerce payment services. The key to widespread adoption of Swish was BankID, which was developed in Sweden in 2011. BankID is a mobile banking ID that can be linked to a phone number, allowing easy identification of individuals. In Singapore, the United Kingdom, Australia and other countries, banks also offer mobile transfer systems for small remittances. These developments indicate that while encouraging competition between private businesses leads to more user-friendly services, businesses also need to cooperate to build infrastructure for authenticating users and sending payments. Japan is in urgent need of a mobile system for transferring small remittances, which is highly convenient, low-cost, safe and secure. Such a network will become a cornerstone of the infrastructure Japan needs to promote the use of digital currencies.

2.7 Can a Loyalty Points System Boost the Spread of Cashless Payments?

To reduce the impact of the October 2019 increase in consumption tax, the Japanese government introduced a reward or loyalty points program for nine months.¹ To promote the use of cashless payments in small- and medium-sized enterprises, the government shoulders the cost of a system, which allows consumers to earn reward points for cashless payments that can then be redeemed in the form of discount tokens usable upon a later purchase at the store. The system can lead to substantial discounts that somewhat alleviate the cost increases that consumers face after the tax hike. It simultaneously encourages shoppers to pay cashless.

Japanese e-commerce platforms such as Rakuten and the SoftBank (Yahoo!) Group have begun creating digital point systems that let consumers pay in points for a range of day-to-day products and services (Okina, 2019b). These systems have popularized the concept of paying with points, which function as a kind of corporate currency. Indeed, points are increasingly functioning as regular currencies. Many points can be exchanged for different points or converted into cash. Recent years have even seen the development of systems that enable the use of points for investment purposes.

The Japanese Financial Services Agency encourages these initiatives in its policy agenda (Financial Services Agency, 2019). Naturally, points still lack much functionality that would be expected of a currency. Many are only valid for a limited time, for example, or can only be used as a means of exchange in particular stores. Still, consumers are increasingly embracing points systems as a part of the economy. The promotion of points systems is part of the range of policy measures used by the Japanese government to encourage cashless payments, that these points are being used as a form of virtual currency, and that the concept of a currency is becoming increasingly diversified. The following sections will take a closer look at the prevalence and nature of loyalty systems in Japan and their relation to cashless payments.

3 Prevalence and Nature of Digital Points Systems

3.1 Are Loyalty Points Japan's Corporate Pseudo-currency?

How close have retail loyalty points come to being a form of currency? Retail outlets in Japan, such as cake stores, give out loyalty points in the form of paper stamps. Once customers have collected enough points, they present them to the store to receive a discount on their next cake purchase. This does not imply however, that the paper

¹ See <https://cashless.go.jp/>. In the text that follows, the terms reward points system and loyalty points system are used interchangeably.

stamps themselves constitute a means of payment. When platform provider-style companies issue loyalty points, however, they seem to be creating credit in their own private currency. These points, which can be used at member stores, have begun to gain general acceptance; together with a customer's purchase history, they are stored as digital data on point cards, electronic money, credit cards and other media. Customers appreciate the points they receive as much as they would a cash rebate. The points are eventually converted to yen and treated as a discount on the price of a subsequent purchase.

Digital reward points function as a means of digital payment for a range of goods and services at member stores. New participants in the electronic money arena have recently begun competing to grant more loyalty points to consumers, and this approach is expected to become more widespread in the future, with loyalty points expected to gain an increasing presence as a means of electronic payment. Nonetheless, loyalty points have many characteristics that distinguish them from cash (banknotes), or legal currency. They perform a function similar to that of money, but do not seem to be in competition with legal currency. Here, I would like to deepen the discussion on the features of Japan's characteristic systems of loyalty points as currencies, and examine several issues that should be considered in the future.

3.2 The Scale of Loyalty Points Systems

The value of reward points issued is estimated by the Nomura Research Institute (NRI) to amount to one trillion yen annually (NRI, 2016). According to the same study, excluding points issued by individual companies, such as electronics retail stores, airlines, and gas stations, the value of points issued by platform provider-style companies is around 700 billion yen.

Loyalty points have gained significant acceptance as a pseudo-currency. In a questionnaire survey by NIRA, 95% of respondents used loyalty points, and 50% used them frequently (NIRA, 2018). Assuming, therefore, that 70% of the points are used, it seems that the equivalent of around 500 billion yen in points are used as a means of payment for goods and services in a variety of stores annually. The balance of points outstanding depends on expiry dates. Consequently, the total value of outstanding points is not certain, but it is unlikely to be significantly greater than the amount issued in one year. Table 4 shows the scale of point usage, assumed to be 500 billion yen, compared to other payment methods.

Assuming the value of loyalty points used as a generally accepted payment method is around 500 billion yen per annum, then it is certainly quite small compared to the value of bank deposits or payments using bank deposits, yet somewhat significant compared to the overall value of electronic money (297.5 billion yen). In reality, however, the scale of annual loyalty point usage is quite small when compared with the amount of payments for retail transactions, and is equivalent to only one tenth of annual payments using electronic money, or one third of payments using debit cards.

Table 4 The scale of payment methods

Average balance of money stock and balance of electronic money (as of May 2019)
• Deposit currency (M1 based checkable deposits): 699 trillion yen
• Cash currency in circulation: 102 trillion yen
• Electronic money: 298 billion yen

Payments associated with deposits (as of May 2019)
• Average business day payments over one year for the Zengin System (interbank payments system):* ¹ 13,009.2 billion yen (1.87 million yen per transaction)
• Average business day payments for the Core Time System (interbank payments system):* ²
• 3789.7 billion yen (0.59 million yen per transaction)
• Average business day payments for the average week-day payments for the Core Time System (interbank payments system)* ³
• 79.8 billion yen (0.16 million yen per transaction)
Payments through methods other than deposits (fiscal year 2018)
• Electronic money payments (annual): 5479.0 billion yen (936 yen per transaction)
• Debit card payments (annual): 1413.1 billion yen (5368 yen per transaction)
• Credit card payments (2018): 56,711.5 billion yen

Notes (1) Of which 9,379.5 billion yen are large-scale internal currency transactions. (2) System for small-scale currency transactions, operating from 8:30 a.m. to 3:30 p.m. on weekdays. (3) System for small-scale currency transactions, operating when the Core Time System is closed, such as at night, in the early morning and on weekends

Sources Bank of Japan Payment and Settlement Statistics, and Japan Consumer Credit Association Statistics

The relatively low transaction figure may reflect the fact that loyalty points do not circulate like other forms of payment do.

3.3 *The Incomplete Function of Loyalty Points as Currency*

Loyalty points are used as a means of payment when purchasing goods or services, and are often exchanged for other points. It is clear that points issued by platform provider-style companies in particular are gaining general acceptance, and some have begun to take on a currency-like aspect. Their main features in this respect are listed below:

- issued by companies rather than a central bank, representing a liability for the issuing company,
- electronic (digital) in many cases,
- token-based rather than deposit-style (account-based) in many cases,
- consumers can use the points within an extensive “economic zone” defined by the issuing company’s network of member stores.

In categorizing various kinds of money, economists at the Bank for International Settlements (BIS) recently introduced the concept of the “Money Flower” (Carstens, 2018). The “money flower” is a taxonomy, which classifies various kinds of money

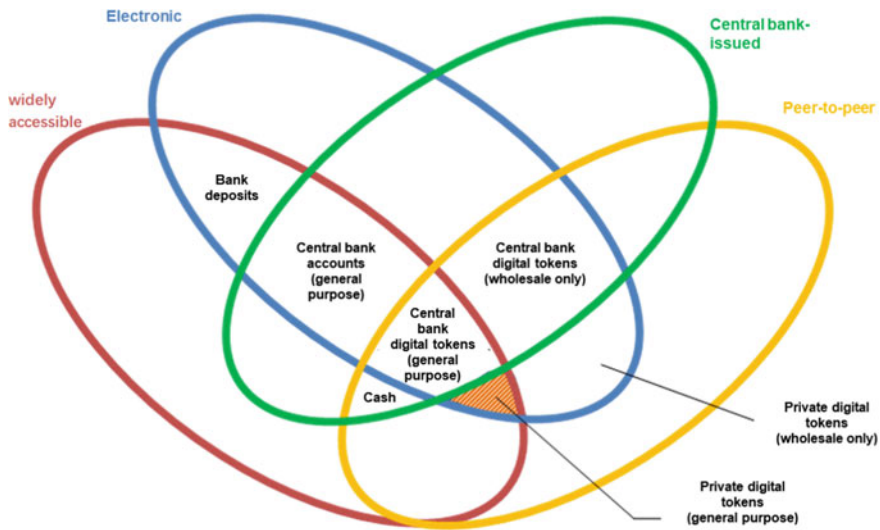


Fig. 3 Positioning of loyalty points on the Money Flower. *Source* Carstens (2018), revised by the author

using four supply-side criteria: issuer central bank or not, electronic (digital) or not, widely used or not; and token-type (peer to peer) or account-type. According to this classification, loyalty points are supplied by companies, are mostly electronic, are widely used and represent a token-type money (Fig. 3).

From the perspective of consumers, however, loyalty points exhibit characteristics that distinguish them from other forms of money and electronic means of payment.

- The value per unit and the terms of exchange vary widely: one point cannot usually be exchanged for one yen, points are worth more for purchases at the issuing company, or terms of exchange differ depending on where they are exchanged.
- They can be used for payment only within the issuer's platform, and can be exchanged only between a limited number of companies. As a rule, they cannot be exchanged between individuals. Points with an exchange-like function, however, can be exchanged with a relatively wide range of other points.
- With some exceptions, most have an expiry date, and become void after expiry. These may be converted to cash in order to avoid losing all value, but at unfavorable terms of exchange.
- Balances held by consumers do not increase, as most points are used up in the consumption of goods and services, do not recirculate, and become void upon expiry.
- Points can be accumulated and then redeemed by making payments (by purchasing products, or using cashless payment methods). However, any points saved do not attract interest.

Table 5 Comparison between loyalty points and legal currency

Three functions of currency	Characteristics of loyalty points	Bank deposits	Cash (banknotes)
Unit of account	Value varies depending on when and where points are exchanged	Fixed	Fixed
Medium of exchange	Only exchangeable with specified companies in the same platform	Exchangeable between bank accounts	Exchangeable between individuals
Store of value	Can be accumulated but have an expiry date	Can be used as a store of value	Can be used as a store of value

Source The author

In summary, loyalty points differ from other means of payment such as cash or bank deposits as they do not fulfil the typical three functions associated with a currency, such as store of value, unit of account or medium of exchange (Table 5).

3.4 *How Platform Companies Turned Loyalty Points into a Pseudo-currency*

Considering the origin of loyalty point services as a way for company groups to capture (lock in) customers from competitors, the ability to exchange points represents a reduction in consumers’ switching costs. In principle, exchanges thereby diminish the economic effectiveness of loyalty points for the issuing company, and therefore should be limited for use only with those companies that are not competitors of the issuer. In this sense, the networks that allow points exchanges are thus necessarily asymmetrical and unidirectional. Consequently, it is hard to conceive of most loyalty points issued by individual companies, in particular, ever spreading enough to become an instrument like a common or legal currency that can be used to pay for goods and services at any company. Points can be exchanged only within somewhat closed networks that exclude competitors.

By contrast, PayPay bonuses, LINE points, credit card points and other points issued by platform provider-style companies create their own point-based economic zones through collaboration with member stores and partners, even including rival companies. Therefore, as networks expand, the points gain increasing general acceptance. Being used as a means of payment within the company’s own ecosystem, they become a kind of pseudo-currency. In addition, common or universal points purely for the purpose of exchange, issued by companies without their own products or services, although still small-scale, are gaining general acceptance, and function very much like a currency (<https://www.g-plan.net/>). These points can also be converted into cash, and can be used to make investments. They are being utilized in ways that increasingly resemble bank deposits and other similar financial instruments.

In this way, at present, while the loyalty points issued by individual companies work as a tool to increase switching costs and to capture and lock in customers, those issued by platform provider-style companies are aimed at gaining greater general acceptance and enhancing convenience. They are consequently gaining a greater presence in the context of economic transactions. The issuance of loyalty points is expected to continue to increase in the future. Points issued by platform provider-style companies, in particular, are anticipated to strengthen their currency-like characteristics.

3.5 Fun Features Differentiating Loyalty Points from “Money”

The “Cashless Payment Survey” (NIRA, 2018) reveals that consumers save up points to purchase specific products and services at a discount, that they like to exchange points, and that, unlike money, collecting and using points provide them with a kind of “fun” factor. This relates well to the attraction of digital tokens described by Hatogai (2019), which cannot be experienced with conventional money.

Examining the NIRA survey by attribute reveals that more than 50% of respondents in each age group, with the exception of those in their 60s, like loyalty point services. There is no gender difference between respondents, but in terms of attitudes, female respondents had a 10% higher positive response to survey questions mentioning savings awareness, effective utilization, enjoyment from saving up points and enjoyment from exchanging points (Fig. 4). These results indicate the high degree of interest in points among women. An average of 37.4% of respondents across all age groups enjoys saving up points, but this proportion is higher, 41.3%, among respondents in their 20s, whose income is still low. The younger generation, in particular, finds the act of accumulating points itself enjoyable. A survey of the ways of using points shows that an overwhelming proportion of respondents, 82.7%, use them for discounts on purchases, while 53.2% of respondents exchange points for cash or vouchers, 27.7% exchange them for promotional gifts and the like, and 6.5% use them for donations or other social contributions.

Seen in this way, consumers appear to regard loyalty points not so much as a form of currency, but rather as tokens, which are attractive in different ways. The reverse logic of “saving up by purchasing” constitutes a fun factor. Also, points systems encourage small contributions to society that consumers would not otherwise consider when using money.

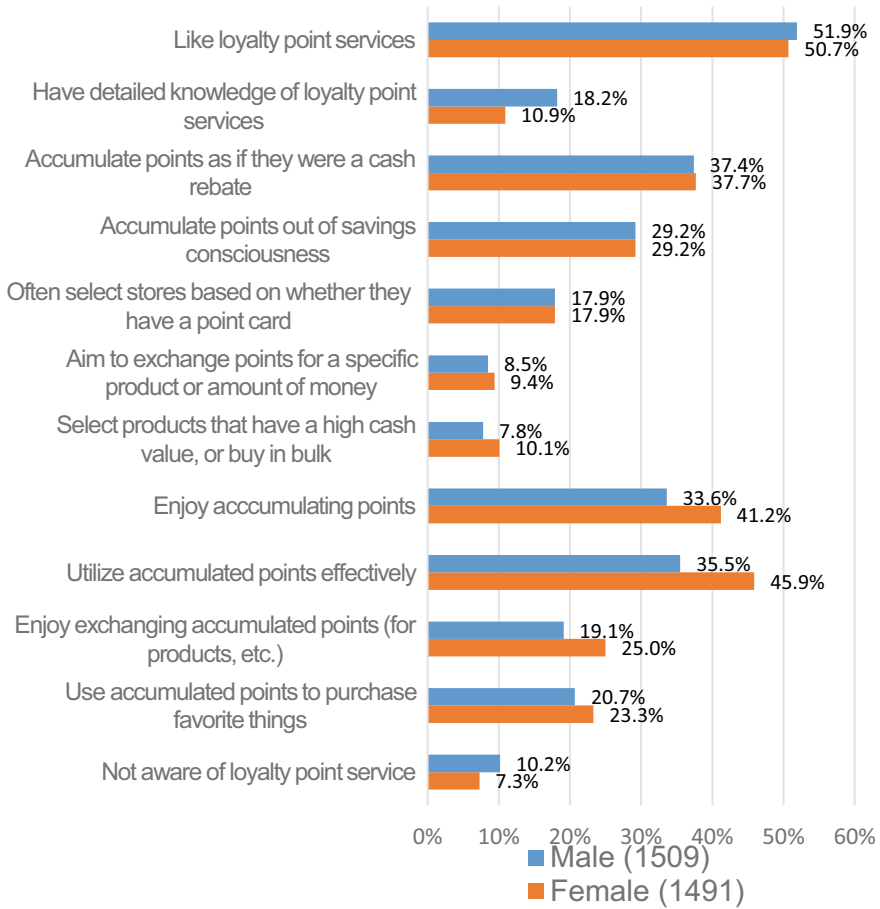


Fig. 4 Attitudes towards loyalty points (by gender). *Note* Percentages represent proportions of responses; multiple responses are allowed. *Source* NIRA (2018)

3.6 Latent Regulatory Issues

Even if loyalty points increasingly resemble currency, they are predicated on the profitability of private companies, and the trust placed in them must be considered in comparison to the creditworthiness of the bodies that issue currencies: central banks and governments as well as commercial banks. To establish trust with regard to financial soundness, safety, and the protection of privacy market competition alone will not suffice.

If the platform companies issuing points go bankrupt, then problems arise in terms of consumer protection. It is even possible that, if the scale of points systems is large enough, such an event might affect the stability of the financial system. Therefore, if points become widely used within an economy, it will become necessary to consider

some form of protective measures to prepare for the possibility of such a bankruptcy similar to those in place for electronic money. In any case, it will be necessary to monitor future trends in loyalty points as a means of payment.

The growth of loyalty points necessitates some degree of monitoring, as described above. However, they do seem to outshine legal currency in terms of convenience and “fun.” With such attractive features, loyalty points do not rely on existing currency systems, and can open new paths for currency diversity.

4 The Future of Cashless Payments and Digital Points Systems

The cashless ratio in Japan was estimated to be 50% of consumer spending in 2018. Since then, the government used point returns for nine months from October 2019 to stimulate consumption and promote cashless payments when the consumption tax was raised. In addition, the cashless ratio in Japan is gradually increasing, as companies are also actively utilizing point redemption. Currently, the Financial Services Agency has no intention of regulating points, but it will be necessary to monitor the market size of points issued by platform companies.

In Japan, the spread of COVID-19 after 2020 is also considered to be increasing the tendency toward a cashless society. It was announced in August 2020 that convenient, low-cost, and interoperable remittance methods between banks will be introduced by the end of 2022 by the MUFJ Bank, SMBC (Sumitomo Mitsui Banking Corporation), Mizuho Bank, Resona Bank and Saitama Resona Bank Group.² It is expected that the cashless ratio will gradually increase in Japan in the future. The issue of the digital divide should be addressed so that as many people as possible can enjoy the benefits of cashless payments. In addition, it is hoped that private-sector cashless means, which are safe and convenient for users, will spread while ensuring interoperability. Supervisors will need to monitor the development and soundness of cashless businesses, paying attention to payment security and consumer protection.

² https://www.bk.mufg.jp/news/news2020/pdf/news0806_1.pdf.

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