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Bridging Borders I: Malaysia's Digital Payments Growth

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Introduction

Malaysia has a high level of digital adoption that has facilitated strong growth in the use of financial technologies (fintech) such as digital payments. The Central Bank of Malaysia (*Bank Negara Malaysia*, BNM) has instituted an Interoperable Credit Transfer Framework (ICTF) that fosters innovation and the development of other fintech services, such as digital banks and cross-border digital payments.

With the intention of expanding Malaysia's participation in global finance and digital trade, both public and private entities in Malaysia are exploring international partnerships for cross-border digital payments. This could improve Malaysia's economic growth and expand its role in the global economy.

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When considering global digital finance, there are at least four policy issues to take into account, namely digital financial inclusion, increasing risks of financial cybercrime, disruptive effects of unregulated decentralised finance and cryptocurrency, and geopolitical considerations.

In a four-part series on Malaysia's expanding fintech and digital payments space, I assess the growth and current state of Malaysia's digital adoption and use of the internet for financial transactions and consider opportunities and initiatives in fintech, particularly in terms of cross-border digital payments. This is a fast-moving and fast-growing sector rapidly introducing innovations and new technologies to consumers.

This first article in the series presents an overview of Malaysia's digital adoption and use of fintech, focusing on the growth in digital payments from 2011–2024.

The second article reviews the contribution of BNM's ICTF and the introduction of digital banks to Malaysia's financial services landscape.

The third article explores the demand for and developments in cross-border digital payments between Malaysia and other countries.

The fourth article discusses policy considerations around the use of digital payments and fintech in a globalised society.

Overview of Malaysia's digital adoption and use

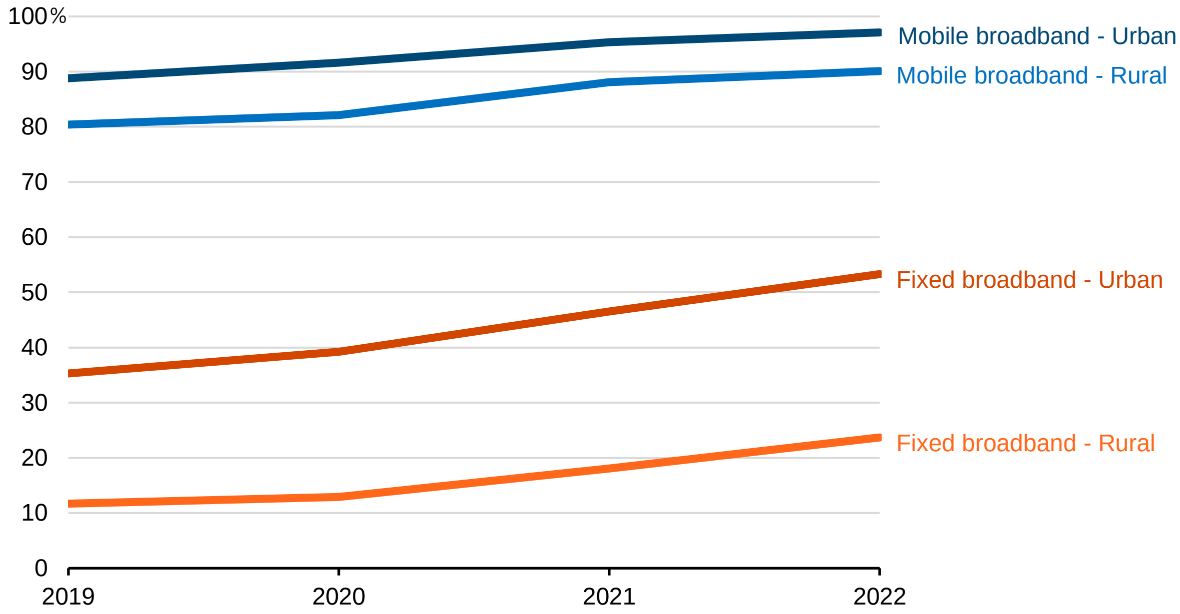
Malaysia has long had high rates of internet penetration and digital adoption[1]. In 2023, 97.1%[2] of populated areas had access to 4G mobile broadband coverage and approximately 96.4%[3] of households used the internet.

Between 2019 and 2022, broadband usage increased, notably during the Covid-19 pandemic when social distancing and movement restrictions forced people to rely on digital tools for work and school[4]. The overwhelming majority of Malaysians access the internet using their smartphones[5], making the country a mobile-first nation where mobile broadband penetration and/or subscription rates are higher than fixed broadband rates.

Figure 1 shows the share of households having access to mobile and fixed broadband from 2019 to 2022. Mobile broadband use is clearly higher than fixed broadband use in both urban and rural areas. The urban-rural gap for mobile broadband use is comparatively smaller than the urban-rural gap for fixed broadband use. Even though an urban-rural digital divide persists, mobile broadband subscriptions for both groups have been consistently above 80% for the past five years.

[1] Gong (2020)
[2] MCMC (2024)
[3] DOSM (2024)
[4] Gong et al. (2022)
[5] KRI (2024)

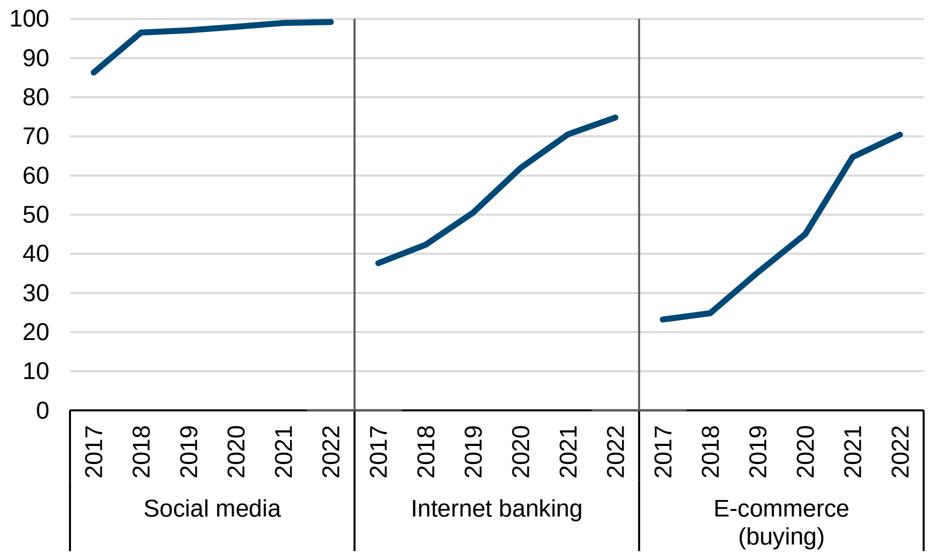
Figure 1: Household access to mobile and fixed broadband by strata, 2019–2022



Source: KRI (2024)

According to data from the Department of Statistics Malaysia (DOSM), the most common use of the internet among households is connecting and socialising with other people on social media. Figure 2 shows the rates of use for social media and two other popular uses of internet access, internet banking and online shopping, from 2017 to 2022. While social media use has been high for a long time, reaching saturation well before the pandemic, the use of the internet for financial transactions such as internet banking and online shopping experienced steady growth during this period with room for further expansion.

Figure 2: Selected digital use in Malaysia, 2017–2022

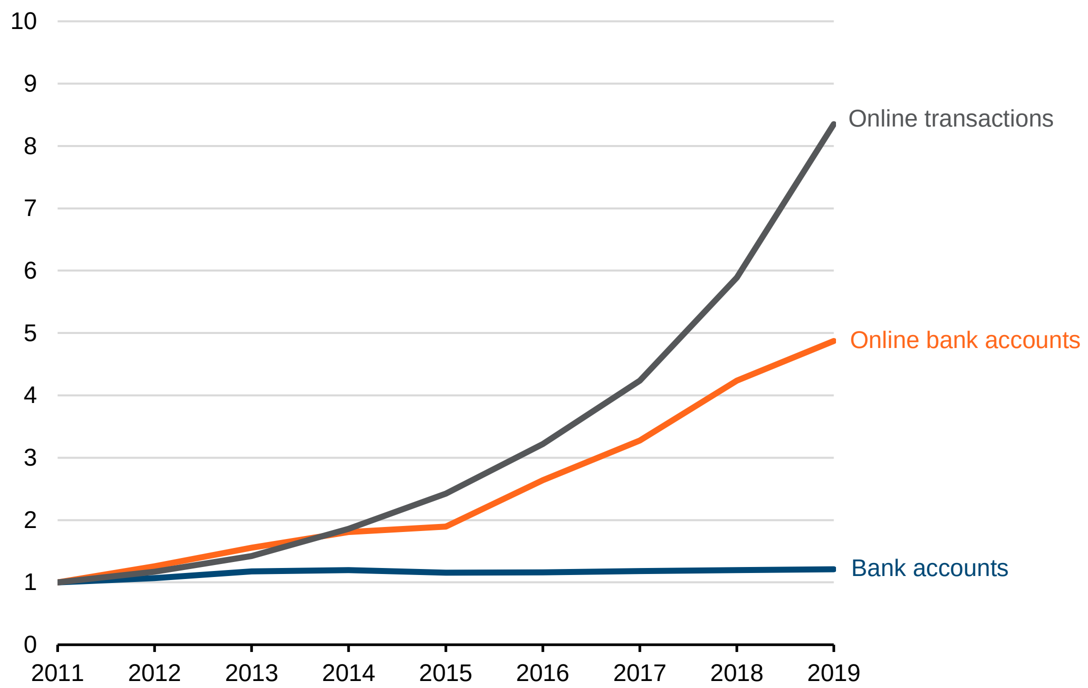


Source: Adapted from KRI (2024)

Growth of digital payments

Data from BNM corroborate the DOSM data, showing that digital payment use has been consistently on the rise since well before 2019. Figure 3 shows the relative growth trends of bank accounts, online bank accounts, and online transactions in the country from 2011 to 2019. As might be expected, the steep growth in the number of online transactions is accompanied by a steady increase in the number of online bank accounts while the number of bank accounts remains relatively constant.

Figure 3: Growth trends of bank accounts, online accounts, and online transactions, 2011–2019 (2019 = 1)



Source: Gong (2020)

The rise in online bank accounts suggests a growing appetite for digital payments and digital financial services among the banked segment of the population. However, it is unclear if this can be associated with increased financial inclusion. There is insufficient public data available to indicate whether the online transactions occur mostly across existing bank accounts or through the rise of other payment instruments, such as e-money via e-wallets (defined below).

Overview of retail payment systems in Malaysia

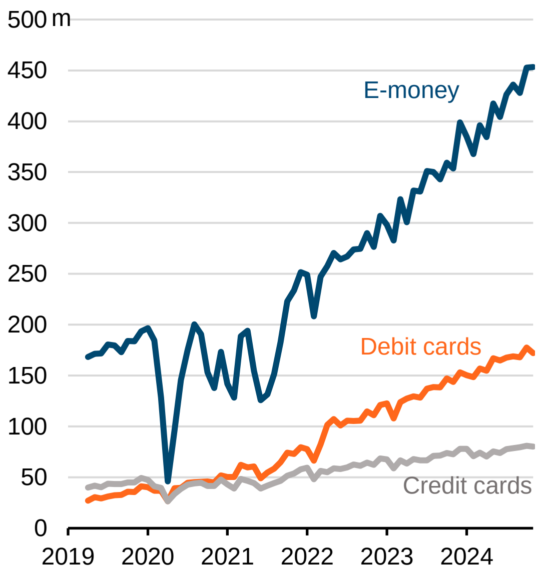
Note that BNM divides retail payments into three categories: payment systems, payment instruments, and payment channels[6].

Payment systems comprise the shared infrastructure supporting financial transactions. For example, the Interbank GIRO (IBG) system supports funds transfers across its participating institutions, while the Direct Debit payment system is an interbank collection service for repeated payments directly from a customer's bank account to multiple banks with a single authorisation.

Payment instruments comprise the tools used to conduct financial transactions, such as credit cards, debit cards and e-money.

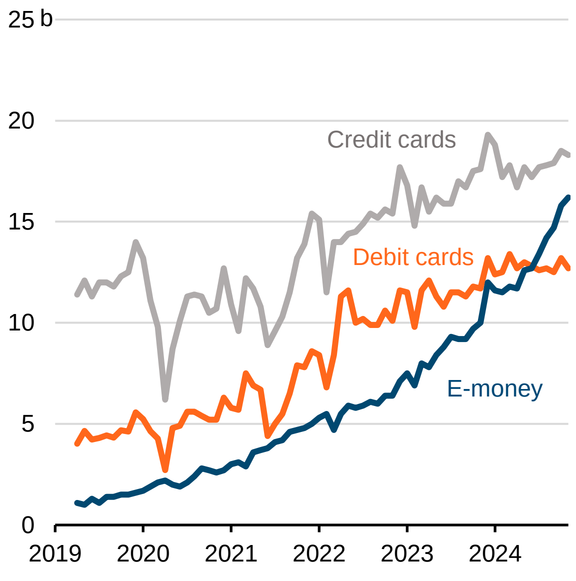
E-money is digital cash that has been pre-deposited, usually into an e-wallet or other digital app, by a user. This digital money can be used in place of physical cash to purchase goods and services and is deducted from the balance on the app, which is a form of network-based mobile payments. Digital money can also be linked with app-associated debit cards, blurring the lines between types of payment instruments. Figures 4a and 4b show the trends in volume and value of transactions via debit cards, credit cards and e-money from 2019 to 2024.

Figure 4a: Volume of debit cards, credit cards, and e-money, 2019–2024 (in millions)



Source: Bank Negara Malaysia (2024a)

Figure 4b: Value of debit cards, credit cards, and e-money, 2019–2024 (MYR in billions)



Source: Bank Negara Malaysia (2024a)

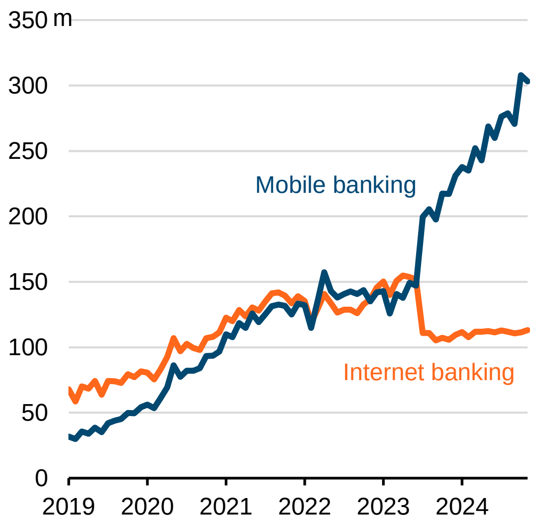
[6] Bank Negara Malaysia (2024b)

The dip in volume in e-money transactions seen in Figure 4a is likely due to reductions in face-to-face payments during movement restrictions caused by the pandemic, but growth quickly rebounds. While volume of transactions for e-money grew more than both debit cards and credit cards, the total value of transactions for e-money has not yet caught up with that of credit cards. This suggests that people use e-money more for low-value payments and credit cards for high-value payments.

Payment channels are the means through which financial transactions are conducted, such as internet banking, mobile banking and mobile payments. Internet banking is banking that is conducted using a computer with internet access, a web browser and a registered account for internet banking services.

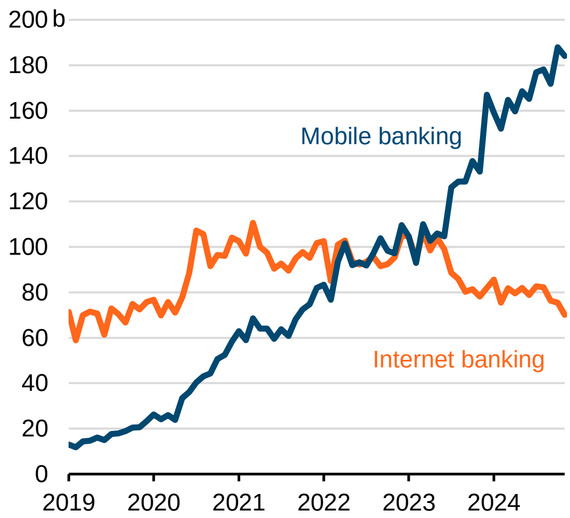
Mobile banking is similar to internet banking, but it is conducted using a mobile phone instead of using a web browser on a computer. Account registration for mobile banking is still a separate step required by banks for security purposes.

Figure 5a: Volume of internet banking and mobile banking, 2019–2024 (in millions)



Note: Data for mobile payments are unavailable
Source: Bank Negara Malaysia (2024a)

Figure 5b: Value of internet banking and mobile banking, 2019–2024 (in MYR billions)



Note: Data for mobile payments are unavailable
Source: Bank Negara Malaysia (2024a)

Mobile payments are non-banking channels through which financial transactions are conducted using a phone, typically using e-money as the payment instrument. However, data on the volume and value of mobile payments are not available. Increasingly these distinctions are becoming more blurred as payment systems become more interoperable, allowing different payment instruments to be used across different payment channels.

Figures 5a and 5b show the trends in volume and value of internet and mobile banking for individuals from 2019 to 2024. As previously mentioned, Malaysia is largely a mobile-first nation, thus it is not surprising to see that mobile banking growth has been much greater than internet banking growth and that internet banking has plateaued both in volume and value over the last two years.

Conclusion

High levels of digital adoption in Malaysia have enabled the digitalisation of the financial landscape, creating opportunities for economic growth, financial inclusion and transactional efficiency. In particular, mobile digital payments, have gained currency (pun intended) in recent years.

As more individuals and businesses adopt digital financial tools, the risk of cyber threats and financial fraud increases, potentially undermining public trust in digital financial systems. Balancing opportunities for growth with these risks is crucial to ensure that the digital financial ecosystem is inclusive, secure and sustainable.

Thus, it is essential that stakeholders, including government, financial institutions, and telecommunications providers, uphold robust regulatory frameworks, expand digital and financial literacy programs and strengthen cybersecurity safeguards. In this way, Malaysia can maximize the benefits of digital adoption while mitigating associated risks.

References

Bank Negara Malaysia. 2024a. “Electronic Payments.” Data.Gov.My. June 12, 2024. https://data.gov.my.

———. 2024b. “Types of Payment Systems.” Bank Negara Malaysia. December 26, 2024. https://www.bnm.gov.my/types-of-payment-systems.

DOSM. 2024. “ICT Use and Access by Individuals and Households Survey Report 2023.” Putrajaya. https://www.dosm.gov.my/uploads/release-content/file_20240626114512.pdf.

Gong, Rachel. 2020. “Digital Inclusion: Assessing Meaningful Internet Connectivity in Malaysia.” Kuala Lumpur: Khazanah Research Institute. http://krinstitute.org/Discussion_Papers-@-Digital_Inclusion-;_Assessing_Meaningful_Internet_Connectivity_in_Malaysia.aspx.

Gong, Rachel, Ashraf Shaharudin, and Siti Aiysyah Tumin. 2022. “Digital Transformation, Education, and Adult Learning in Malaysia.” In *COVID-19 in Southeast Asia: Insights for a Post-Pandemic World.*, edited by Hyun Bang Shin, Murray Mckenzie, and Do Young Oh. London: LSE Press. https://doi.org/10.31389/lsepress.cov.c.

KRI. 2024. “The State of Households 2024: Household and the Pandemic 2019-2022.” Kuala Lumpur: Khazanah Research Institute. https://www.krinstitute.org/Publications-@-The_State_of_Households_2024-;_Households_and_the_Pandemic_2019-2022.aspx.

MCMC. 2024. “Industry Performance Report 2023.” Industry Performance Reports. Cyberjaya: MCMC. https://mcmc.gov.my/skmmgovmy/media/General/Report/MCMC-Industry-Performance-Report-2023.pdf.