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"The Next Wave"
Emerging digital life in South and Southeast Asia

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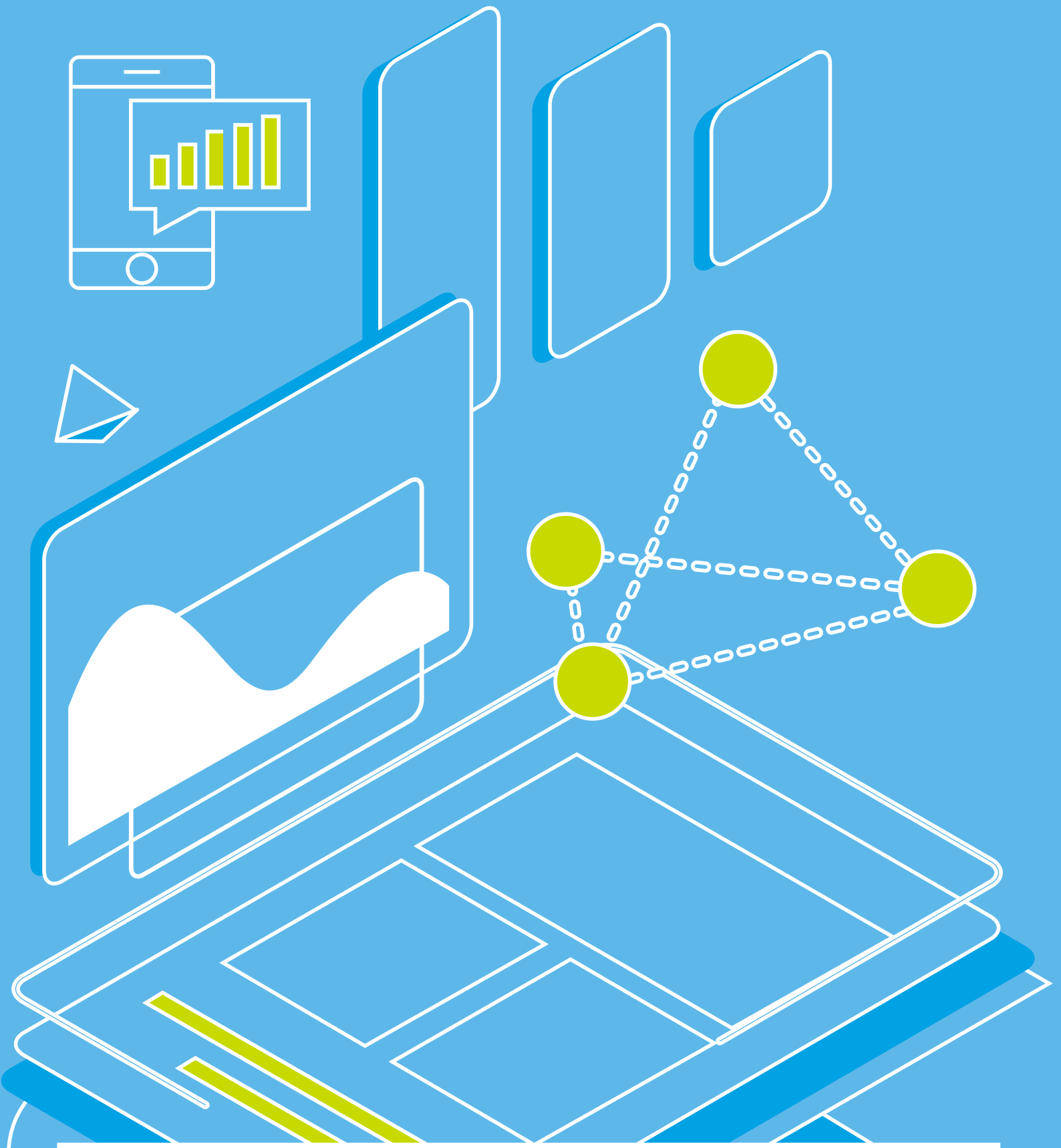
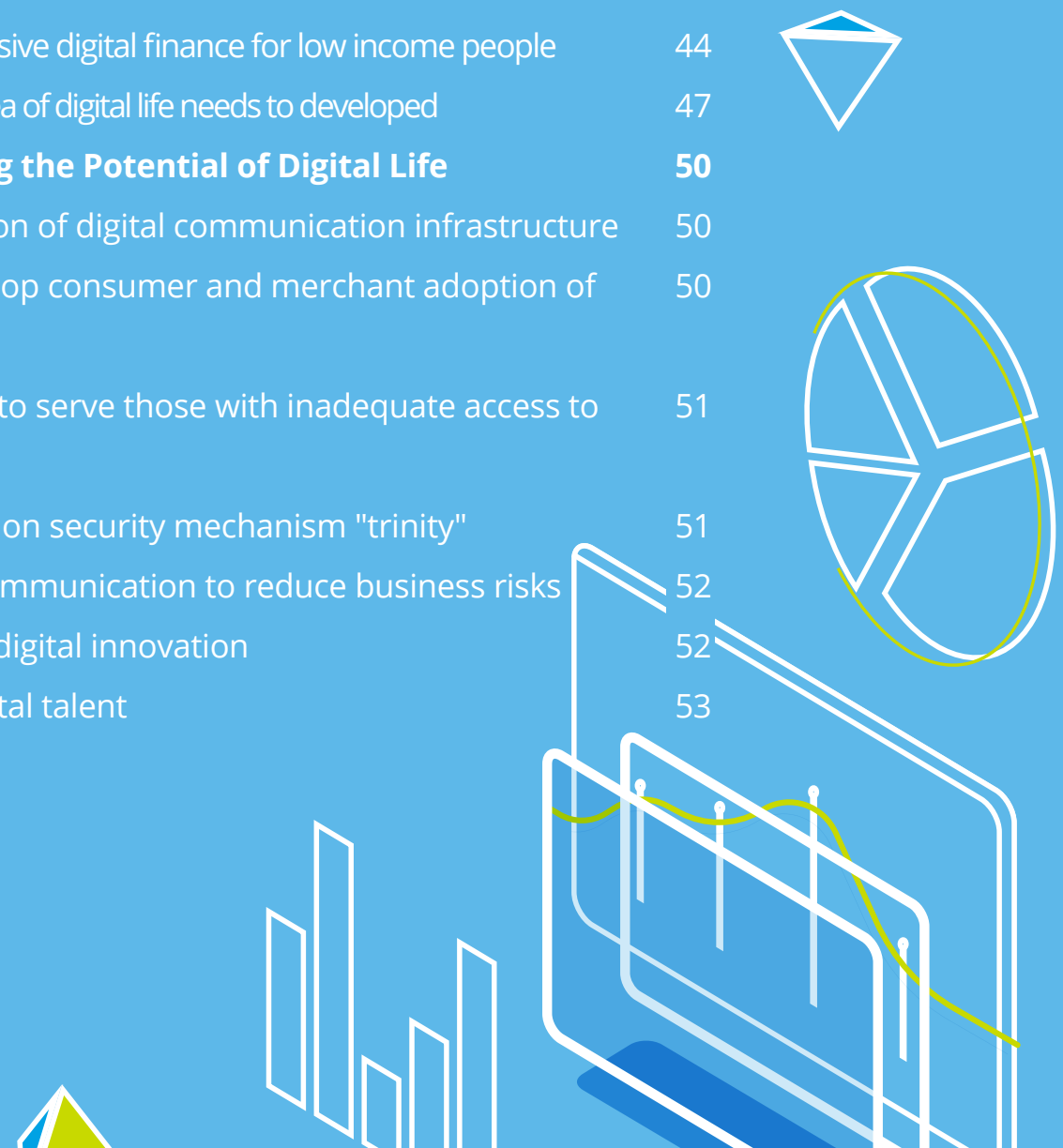


This report is produced by Deloitte in partnership with the INCLUSION Fintech Conference. With the inaugural three-day event held in September 2020, INCLUSION aims to bring together members of the technology and financial communities, to foster a global dialogue on building a more inclusive, green, and sustainable world through digital technology.



Executive Summary

Young and vibrant economies in South and Southeast Asia are rising stars in the development of the digital economy. The region has become the emerging "next wave" presenting enormous opportunities in digital life adoption.

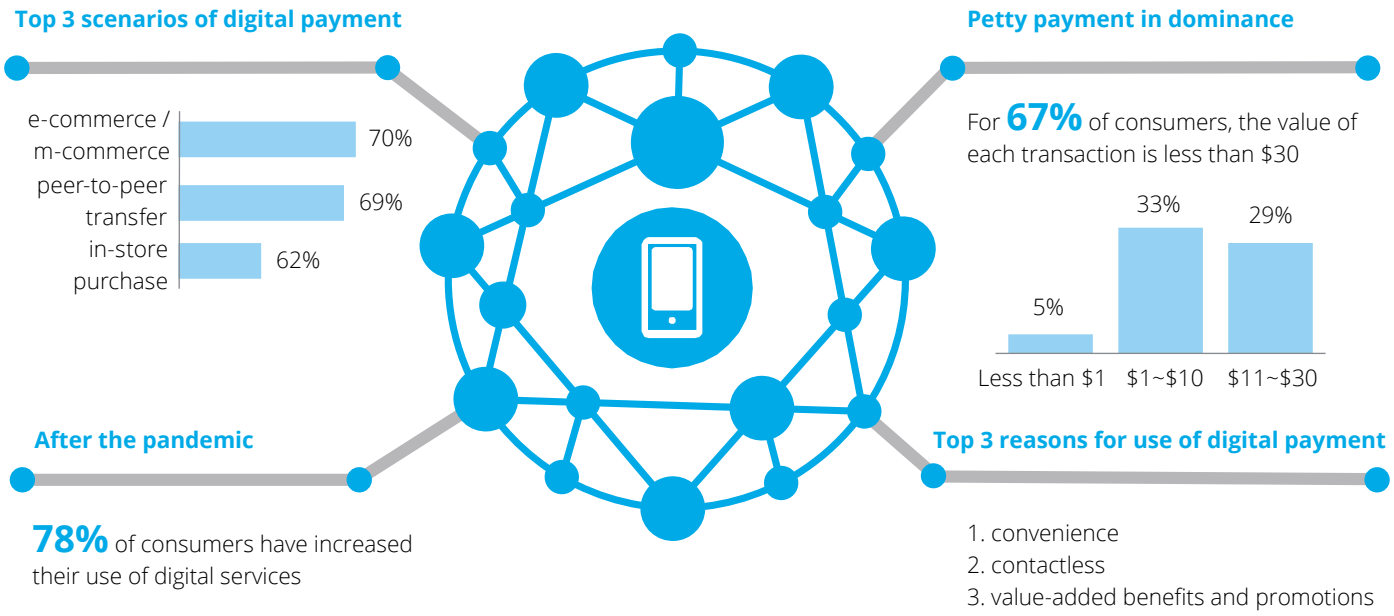
There are four factors behind the rapid rise of digital consumption in South and Southeast Asia:

- First, the population in the region is huge in size and young in age, with digital lives boosted by social media;
- Second, the large number of unbanked and underbanked population in the region has spurred the growth and fast adoption of digital financial services accessible via smartphones, which further promotes the adoption of digital payment;
- Third, with a high mobile penetration rate in the region, consumers are more inclined to opt for m-commerce than those in developed economies; and
- Fourth, most governments in South and Southeast Asian countries have introduced supportive policies to boost development of the digital economy and digital infrastructure.

We surveyed people across age groups in eight countries (Singapore, Malaysia, Thailand, Indonesia, the Philippines, India, Bangladesh and Pakistan). The findings show that young adults aged 21-40 are the leading force enabling the rapid adoption of a digital life in the region in the post Covid-19 world, with 78% of those surveyed in the age group indicating they have increased their use of digital services.

Digital payment as a key enabler is creating and connecting digital life for consumers, making a fundamental shift in social interactions, financial services, digital entertainment, daily life services and shopping habits. The survey also uncovered regional trends in the digital lives of people in South and Southeast Asia, which are summarized below.

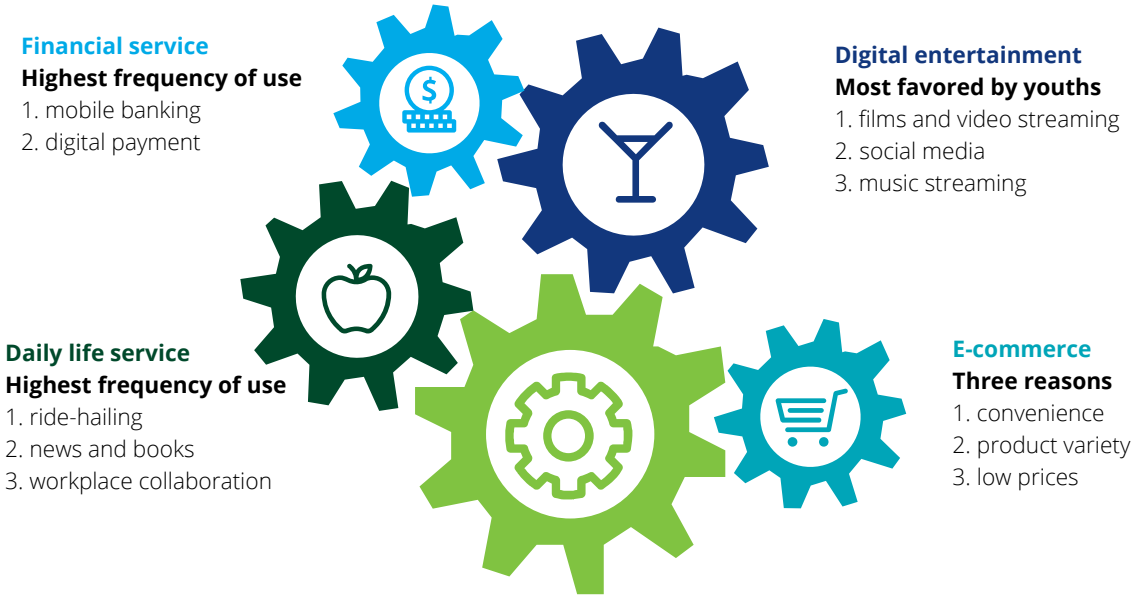
Chart 1: Portrait of Digital Payment in South and Southeast Asia



Source: Deloitte Research

- Digital payment: The top three most common daily life scenarios where consumers choose to use digital payment include e-commerce / m-commerce, peer-to-peer transfer and in-store purchase, of which the majority are of smaller value. Users choose digital payment mainly because it is convenient, contactless and offers extra benefits and discounts.
- Most frequently used mobile APPs in South and Southeast Asia
  - Mobile banking and digital payment are the two most used functions in financial services APPs;
  - Films or video streaming, social media and music streaming are the three most popular modes of digital entertainment;
  - Ride-hailing, news and books, and workplace collaboration are the most frequently used daily life services;
  - The top three reasons for consumers to choose e-commerce/m-commerce are convenience, product variety and low prices;
  - Since the pandemic, the use of digital services has surged.

Chart 2: Four Main Digital Payment Scenarios in South and Southeast Asia



The survey also uses indicators to measure the seven dimensions of digital life in each country. Overall, Singapore and Malaysia are the "leaders", with top performance in every digital life indicator.

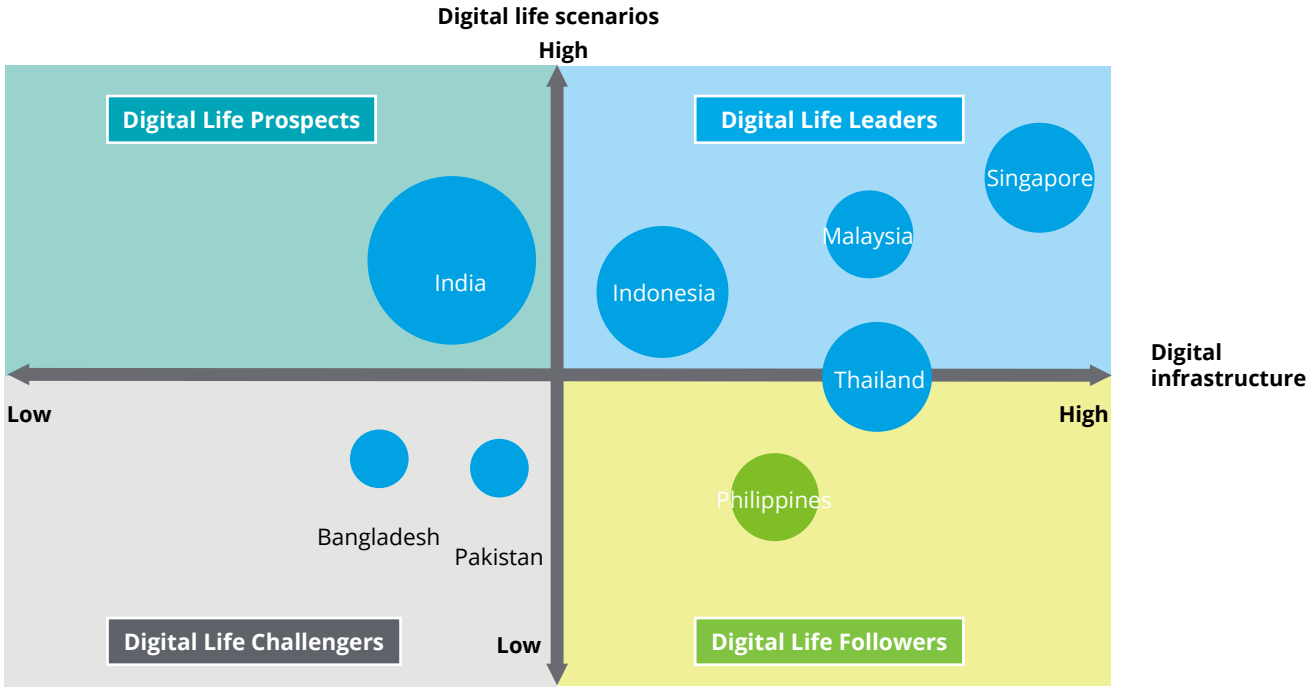
However, there are several "follower" countries that are poised to catch up soon. Thailand is a model in this category. Its high per capita income has led to greater smartphone penetration. Thailand performs strongly by virtue of having vigorous social media and online shopping activity and a mature digital payment segment.

The Philippines, while having room to grow its mobile penetration, has a unique leading edge in digital peer-to-peer transfers, live e-sports broadcasts and other segments of digital life. Although they are not yet equal to the "leaders" in their richness of digital life scenarios, these "follower" countries are set for rapid expansions in their digital economies and are set to catch up rapidly with the leaders through their good digital foundations and effective policy impetus.

In South Asia, India is doing well in cybersecurity. However, because of a wide income gap, it still faces challenges such as slow internet speed and consumers' preference for cash payment. This puts it behind other "follower" nations in the seven indicators.

Bangladesh and Pakistan in South Asia have the farthest to catch up in digital life. Their lower levels of social and economic development have resulted in a large gap with other countries in digital infrastructure and mobile penetration rates.

Chart 3: Digital Life Leaders in South and Southeast Asia



The size of the circle represents the scale of digital economy.

Digital infrastructure: mobile internet speed, mobile phone penetration, government policies
Digital life scenarios: social media, e-commerce activities, digital payment
Source: Surfshark, Google & TEMASEK, GSMA, Statista, Globalweb Index, Deloitte Research

Digital payment is the key enabler enabler of digital life. Compared with mature models of digital payment in other countries and regions, South and Southeast Asian countries have demonstrated the following characteristics:

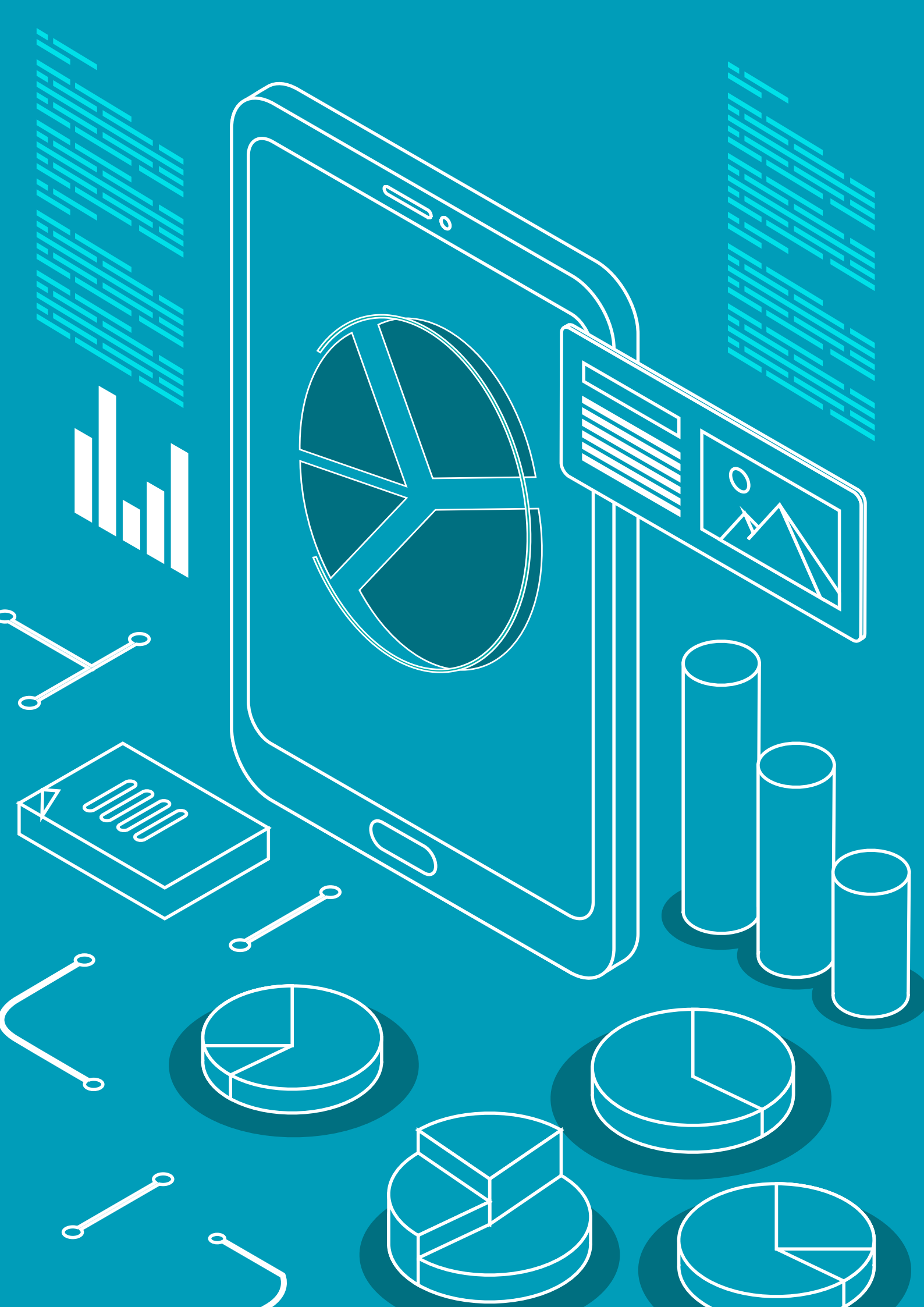
(1) For various reasons, e.g. consumer habits including a continued preference for cash, digital payment in many of these countries relies more on the e-wallet model, which enables ready exchange for cash;

(2) These countries need to rely on offline channels such as convenient store networks to connect consumers due to wide gaps in the availability of traditional finance and weak binding relationships between digital payment, bankcards and bank accounts;

(3) Differences in per capita income result in variations in smartphone penetration; the various modes of digital payment adopted by countries range from PIN codes and QR codes to biometrics;

(4) Governments can play a strong role in promoting digital life by setting up a uniform standard for identification and electronic payment, determining and supervising a uniform payment standard, and using policy tools to drive the popularization of digital payment. Looking to the future, the governments of many countries will construct basic payment platforms and facilities; third-party platforms will continuously innovate their technologies and services and comprehensively promote digital payment models in multiple online and offline scenarios; digital payment in these countries will advance quickly towards more widespread, faster and more secure use.

Although South and Southeast Asian countries are poised for digitalization, they still need to catch up in various areas, with particularly large room for improvement in the construction of their digital foundations, fostering consumer involvement, information security and policy coordination, before they can unleash their huge potential. We believe the richness of digital life in South and Southeast Asia will be unprecedented and contribute to the economies and comprehensive potential of countries in both regions.



Chapter I The Rise of Digital Life

Asia is accelerating its digitalization. In addition to the overall growth of regional economies, the relatively slow development of the traditional Internet is an important driver. This has caused regions whose digital economies were relatively less developed to skip the all-round popularization of the traditional Internet and jump straight into the mobile Internet era. Consequently, mobile phones have become the major route through which consumers in Asian countries gain access to the Internet and, more importantly, are the most important carrier of mobile e-commerce, digital payment and digital life.

Against the backdrop of maturing mobile digital ecosystems in China, Japan and South Korea, manufacturers of mobile phones and mobile applications have already turned to emerging markets, with Southeast Asia and parts of South Asia close to East Asia becoming one of the most eye-catching regions. There are four elements behind the rise of South and Southeast Asia digital consumption:

1)The populations of South and Southeast Asia are large in size and young in age. Especially noteworthy is the fact that their large numbers of people with no bank accounts or insufficient access to banking services have propelled the rapid growth of digital payment; their young populations became "digital natives" long ago and it is these groups that are boosting digital life and consumption through demographic dividends;

2) The high penetration of smartphones and extensive use of mobile applications have become the core of local digital life;

3) The penetration of smartphones has advanced the use of mobile applications, e.g. social media, live webcasts, mobile phone games, e-commerce and digital payment, with users more inclined to use mobile e-commerce than their peers in developed economies; and

4) Most countries in the two regions came to see the importance of the digital economy long ago and have introduced policies that support its development and facilitate the construction and promotion of digital infrastructure.

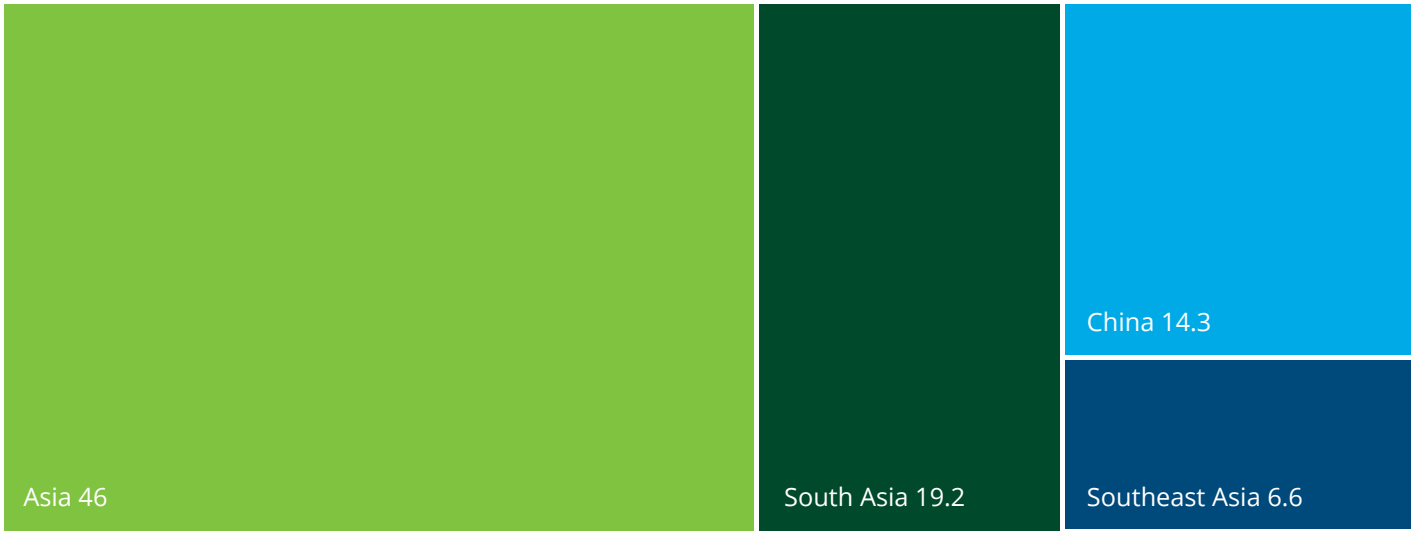
This is why South and Southeast Asia, as emerging regions, are expected to become the engine that drives global digital life into a new era.

Trends and characteristics of digital life

Large population base and young demographics

As of 2019, the Asian population is six times that of Europe and 12 times that of North America. The total population of Southeast Asia is now about 660 million. Including the populations of India, Pakistan and Bangladesh in South Asia, the total population exceeds 2.5 billion, nearly double that of China. This huge population brings boundless potential for digital life.

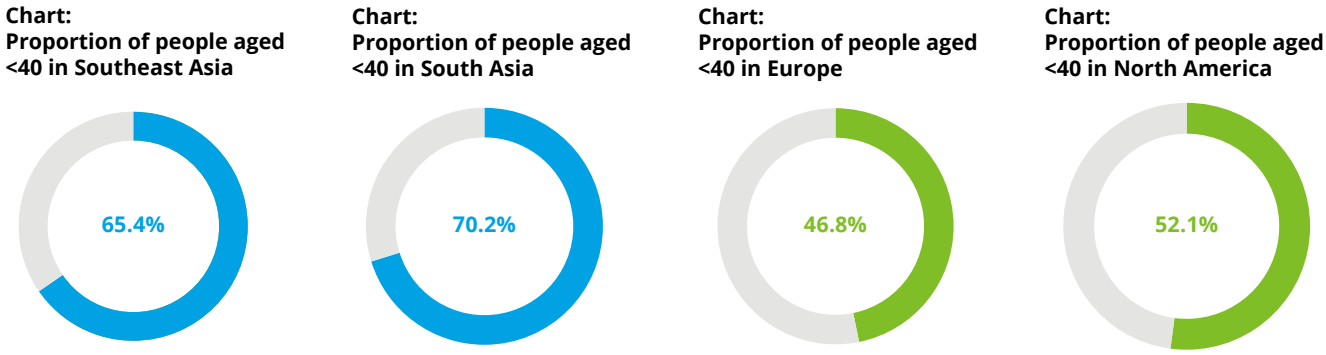
Chart 4: Demographics of ASEAN and South Asia (2019, 100 million people)



Source: World Bank

The proportions of young people in South and Southeast Asia are much higher than they are in Europe and America. In Asia, the proportion of people aged <40 is 62.5%, rising as high as 65.4% and 70.2% in South and Southeast Asia, compared with just 46.8% and 52.1% in Europe and North America. "Digital natives" born after the 1990s are more familiar with the Internet and digital life, with a higher acceptance of Internet-related advances and a faster learning curve. The future development of the Asian Internet will benefit from this demographic dividend. The "next wave" of South and Southeast Asia represent the future development direction of digital life.

Chart 5: Comparison of population structure



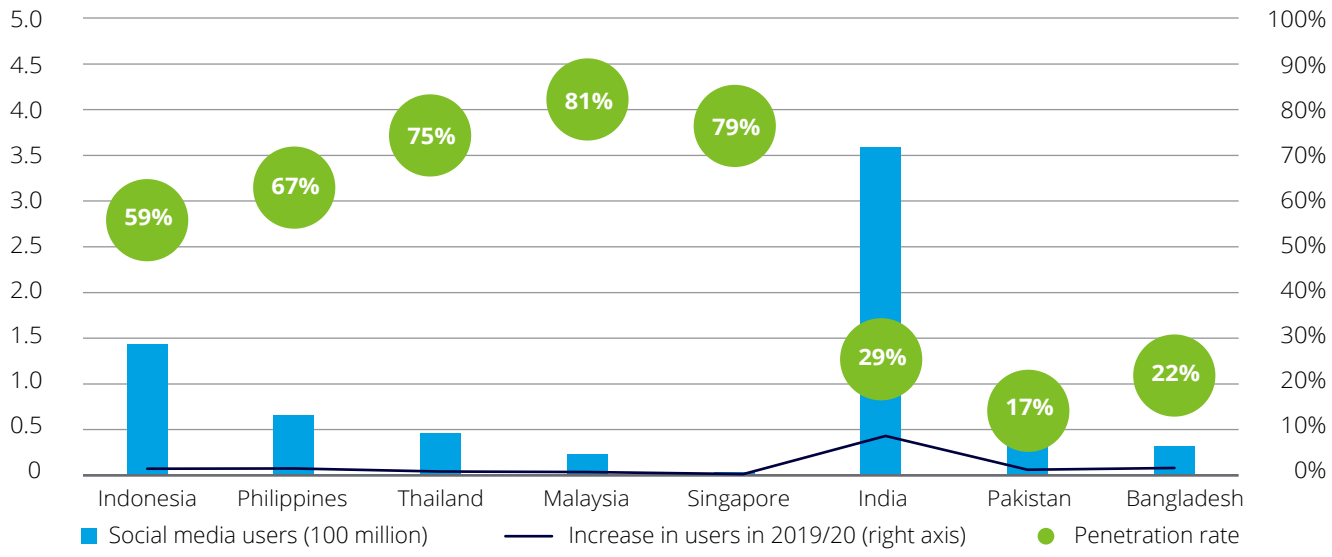
Source: World Bank

Digital life boosted by social media

Most users of mobile Internet applications are young people, and those using social media are the largest cohort. The "content + platform" model has realized precise matching between the content loved by young users and their hobbies, including games, cartoons, celebrities, exercise, fashion and beauty and new technology. This model has also continuously derived new business paradigms, including social media + e-commerce, social media + games and social media + advertising.

The penetration rate of social media in Southeast Asia is much higher than it is in South Asia. Although the penetration rate of social media remains low in South Asia, 2019/20 still saw an increase of 48% in social media users in India, with Pakistan and Bangladesh also maintaining rapid increases. In Southeast Asia, Malaysia has the highest social media penetration rate, social media has almost reached saturation in Singapore, and social media users in The Philippines and Indonesia are increasing rapidly.

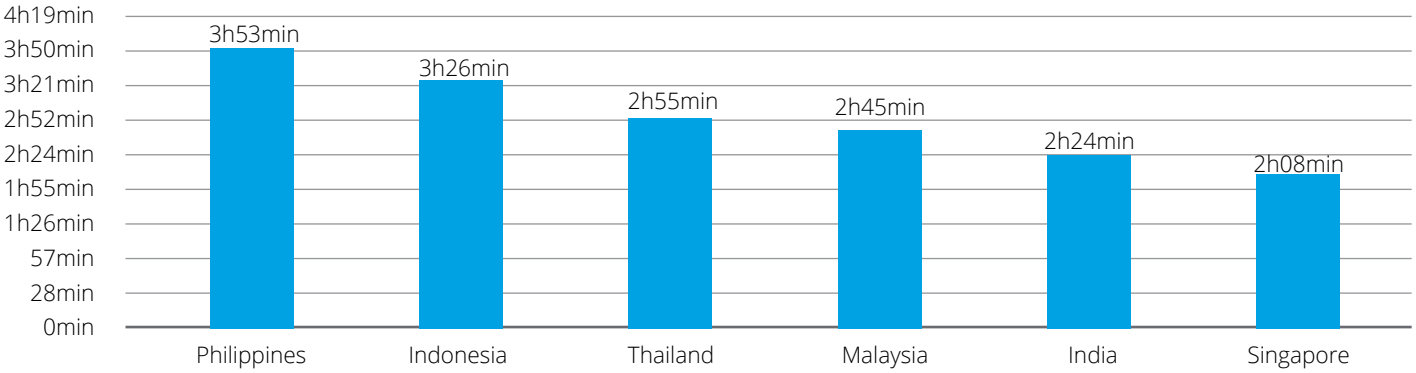
Chart 6: Social media users, growth rate and penetration rate in South and Southeast Asia in 2020



Source:Datareportal

The Philippines, Thailand and Indonesia have the keenest social media users. In Southeast Asia, average daily use of social media rose steadily from 2012 to 2019 and then leveled out. In the Philippines, people's daily use of social networking is the longest in the region, at 3 hours and 53 minutes, compared with 3 hours and 26 minutes in Indonesia and 2 hours and 55 minutes in Thailand. Social media use is shortest in Singapore.

Chart 7: Average daily use of social media in South and Southeast Asia (hours)



Source: Globalweb Index

Social media has become a driving force in visits to shopping websites. Constantly increasing user flow and activity have made social networking the major media to attract customer groups. "Consumption" tends to be bound together with social interaction. When sharing a commodity with family members, classmates and friends, young consumers are more likely to be stimulated and influenced by sharing to shop more, a phenomenon known as "grass planting". Shopping is often followed by sharing, and together they form a cycle of "sharing-purchase-sharing-purchase".

Factors driving the rise of digital payment

There are four aspects behind the rapid rise of digitalized consumption in South and Southeast Asia:

1) The population in South and Southeast Asia is huge in size and young in structure;

2) The high degree of smartphone penetration and extensive choice of mobile applications have contributed to highly active social media, live webcasting, gaming, e-commerce and digital payment, making users in South and Southeast Asia more inclined to use mobile e-commerce than those in developed economies;

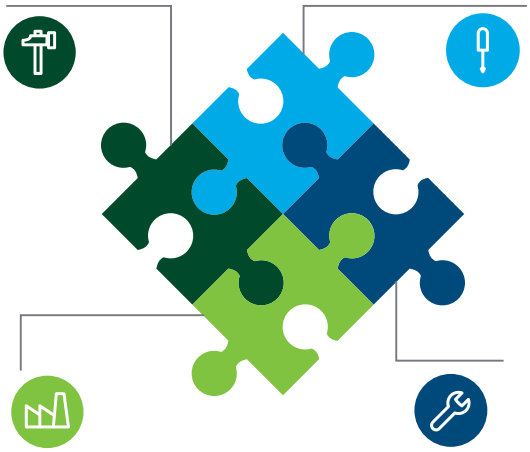
3) South and Southeast Asia that lack inclusiveness in traditional finance, have lower availability of traditional financial services and relatively less developed infrastructure have generated large numbers of people with no bank account (the unbanked) or insufficient access to banking (the underbanked). However, smartphones and digital payment can help these people access financial services quickly and conveniently, reducing the time and cost of transactions, and thereby boost growth in digital payment;

4) Most countries realized the importance of the digital economy long ago and have introduced a series of policies that support its development and facilitate the development and promotion of digital infrastructure.

Chart 8: Factors driving the rise of digital payment

Demographic advantage
In South and Southeast Asia, the population is huge in size and young in structure

Traditional finance lacks inclusiveness
Constrains access to regular financial services; there is less developed infrastructure and a high proportion of unbanked or underbanked people



High degree of smartphone penetration
This has laid the foundations for the extensive availability of mobile applications

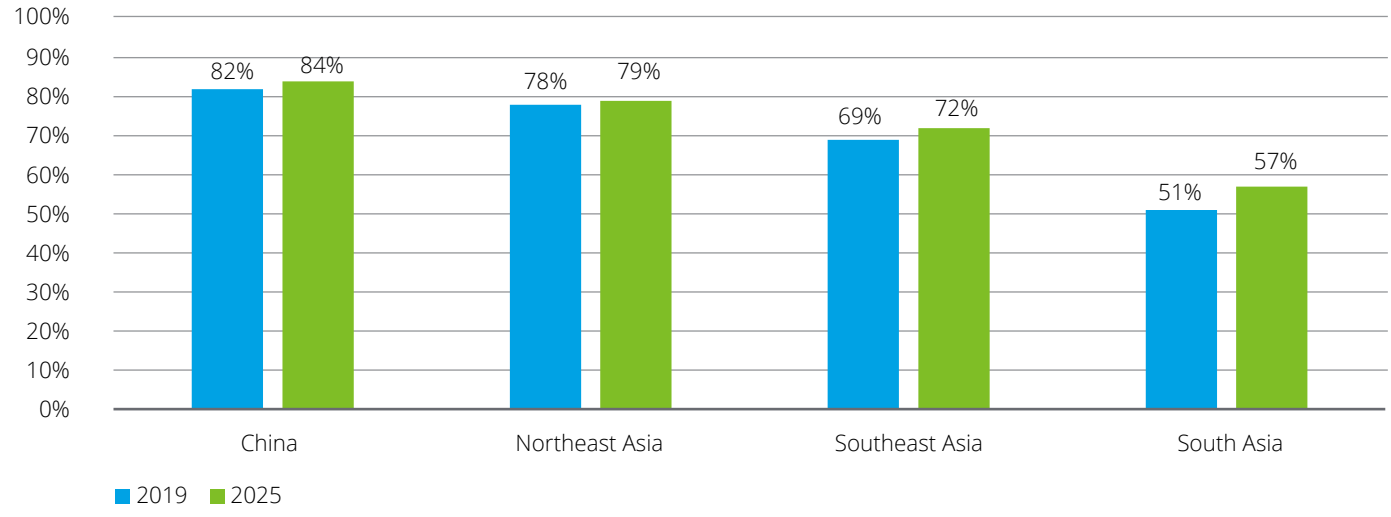
Policy support
The importance of the digital economy has prompted every country to introduce policies that boost its development and support the construction of digital infrastructure.

Rapid penetration and adoption of smartphones

Asia has the largest number of mobile phone users in the world, with two-thirds of its people using mobile services. South and Southeast Asia have the fastest growth rates. With a digital economy second only to that of the United States, China boasts the most advanced digital life in Asia. Northeast Asia (Japan and South Korea) also maintain leading positions in digital life. With the dissemination of the Internet and infiltration of smartphones, the growth of digital life in Southeast Asia countries is not to be underestimated.

Thanks to the reduction of charges for mobile data and the improvement of network connectivity, the number of people using the mobile Internet in South and Southeast Asia is constantly growing, making them among the world's fastest growing regions in mobile Internet penetration rate. In South Asia, India, Bangladesh and Pakistan are relatively behind in telecommunications infrastructure and need to enhance the quality, penetration rate and degree of acceptance of the digital economy. However, these regions have enormous potential and their future growth rates will be the fastest in Asia. In the next five years, the proportions of mobile service users are expected to increase by 3 percentage points in Southeast Asia and 6 percentage points in South Asia.

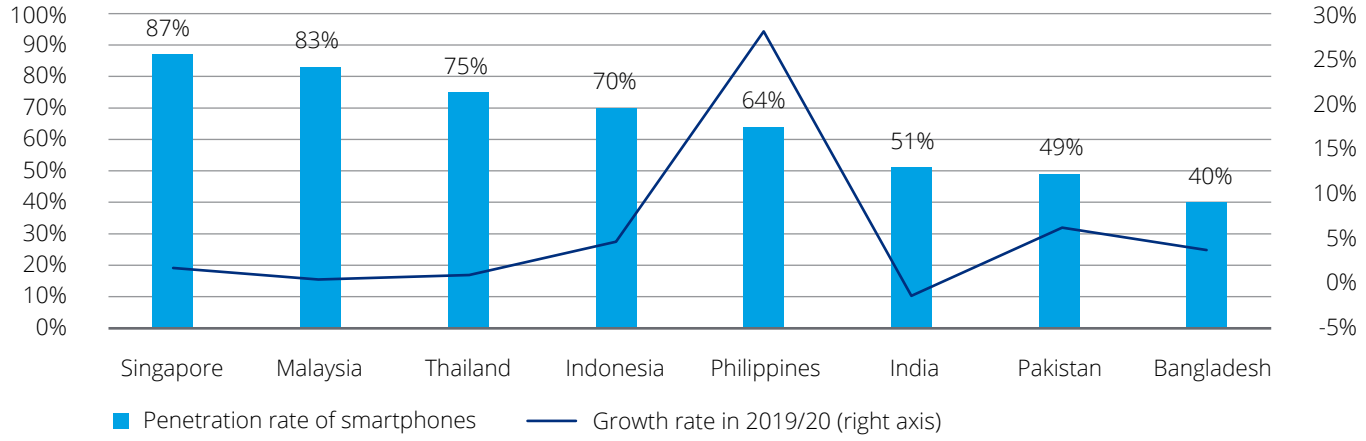
Chart 9: Ratio of mobile service users



Source: GSMA

In South and Southeast Asia, Singapore has the highest penetration rate of smartphones, followed by Malaysia and Thailand. In the Philippines, the mobile phone connection rate increased by as much as 28% in 2019/20; in Pakistan and Bangladesh, although the penetration rate of smartphones is lower, annual growth rates of 6.2% and 4.5% are faster than in other South and Southeast Asian countries.

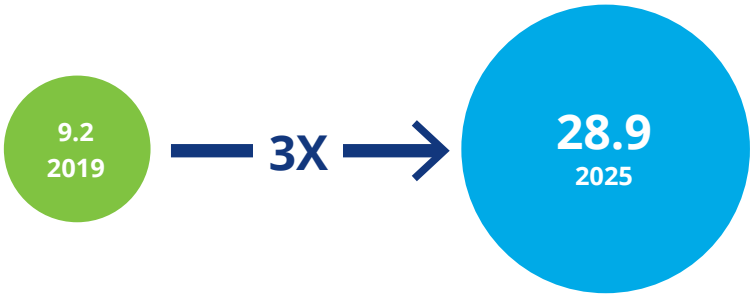
Chart 10: Smartphone penetration in Southeast Asia and South Asia in 2020 and increase in mobile phone connections in 2019/2020



Source: GSMA, Datareportal

It is expected that by 2025, three large markets for smartphones will arise in Asia: China, India (South Asia) and Indonesia (Southeast Asia). By 2025, India will have nearly 1 billion and Indonesia nearly 351 million smartphone users. Additionally, between 2019 and 2025, the consumption of mobile data in Asia will increase more than three-fold.

Chart 10: Consumption of mobile data (GB per month per user)



Source: GSMA

In contrast with the lack of inclusiveness of traditional finance,digital payment reduces the time and cost of transactions

In general, with the exception of Singapore, financial systems are undeveloped and regular financial services are in short supply in Southeast Asia and South Asia.

In Southeast Asia, 60% of the population has no bank account. In Indonesia and the Philippines, the ownership of credit cards is lower than 2%. In India, 60% of commercial orders are paid for in cash, and although there are 800 million bank accounts, only 250-300 million people actually use them[1].

In Bangladesh, traditional financial services are even more scarce, such that people have to pay USD 0.12 to open bank accounts, a high amount for many low income people. More importantly, banks are not popular, especially in rural areas. Rural youths who work in cities do not remit the wages they earn back home, instead asking passing truck drivers to take the money back. This approach is not only inefficient, but also highly risky. Digital payment can overcome these problems by reducing the time and cost of transactions to provide low-cost services for the lowest earners. In Singapore, banks are very popular, with over 90% of the population holding a bank account, and nearly 80% of people using credit cards for payment. But even in Singapore, some street vendors do not collect payments through credit cards, as they are unwilling to pay the high merchant charges. Digital payment has become a better choice for small enterprises to lower transaction costs. According to the latest analysis from GSMA, the trading volume of merchants using digital payment is three times that of those providing only traditional payment channels.

Strong government support for the digital economy

In today' s world, the digital technology has become the most important foundation for industrial, business and economic models. Digital technology is becoming the dominant engine of economic development for every country. Developing the digital economy has become an important means of responding to fierce international competition and seizing strategic advantage. Most Asian countries came to see the importance of the digital economy long ago, and have introduced a series of policies to support its development.

Table: Policies in South and Southeast Asia to promote the digital economy

Country	Policy
India	2015: Digital India 2018: National Digital Communication Policy 2020: Google announced establishment of "India Digitization Fund"
Indonesia	2015: Toward a digital vision in 2020 plan 2016: E-commerce Roadmap
Pakistan	2018: 1st Policy for Digital Pakistan support plan
Bangladesh	2015: National ICT Strategy
Philippines	2016: 2016-2020 E-Commerce Roadmap 2019: Digitalization Transformation Strategy (2022)
Thailand	2016: Thailand 4.0
Malaysia	2019: Vision of Shared Prosperity in 2030 2019: Exposure Draft for Framework of Digital Banking License
Singapore	2018: Blueprint for Digitalization Readiness

Source: Deloitte Research

[1]Observation Group of Digital Finance Research Center, Beijing University, *Observation Report on the Financial Technology of Four Asian Countries*

Digital payment the key enabler enabler of digital life

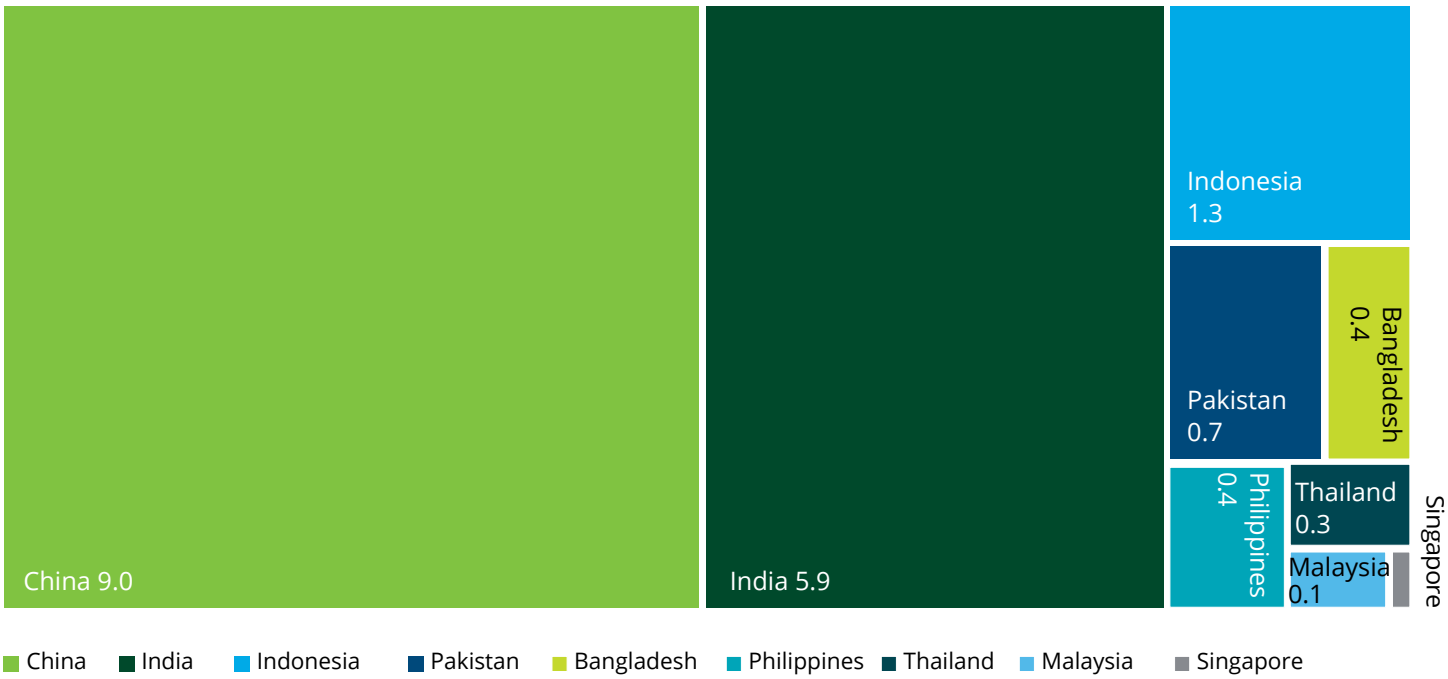
Digital payment has boundless potential

In just two years from 2017 to 2019, global users of electronic wallets skyrocketed from 500 million to 2.1 billion, with developing countries accounting for the lion' s share of the increase, and China and India having a combined 70% of all users. In 2019, digital payment developed at an unprecedented speed. Mobile currency was initially a product for a small number of specific markets. It has now become a global phenomenon and shown surprising growth in emerging markets, benefiting an extensive group of users. China, Japan and South Korea hold a safe lead in terms of the quantity and scale of digital payment use. In China, the proportion of digital payment is as high as 86% and its popularity is about three times the average global level. Because of their large population bases, India and Indonesia have reached the second echelon in digital payment volume.

However, across South and Southeast Asia, this trend is still at an initial stage. In these two regions with the largest populations and most vigorous economies in the world, everywhere except Singapore, with its fairly mature digital payment landscape, still have much room to grow. In Malaysia, the Philippines and Thailand, the business model of digital payment is in its initial stage but there has been a rapid increase in digital payment transactions. In Pakistan and Bangladesh, where digital payment started late and had a lower level of development due to less advanced financial technology, the digital payment growth rate is strong and the number of users is increasing much faster than it is in Southeast Asia.

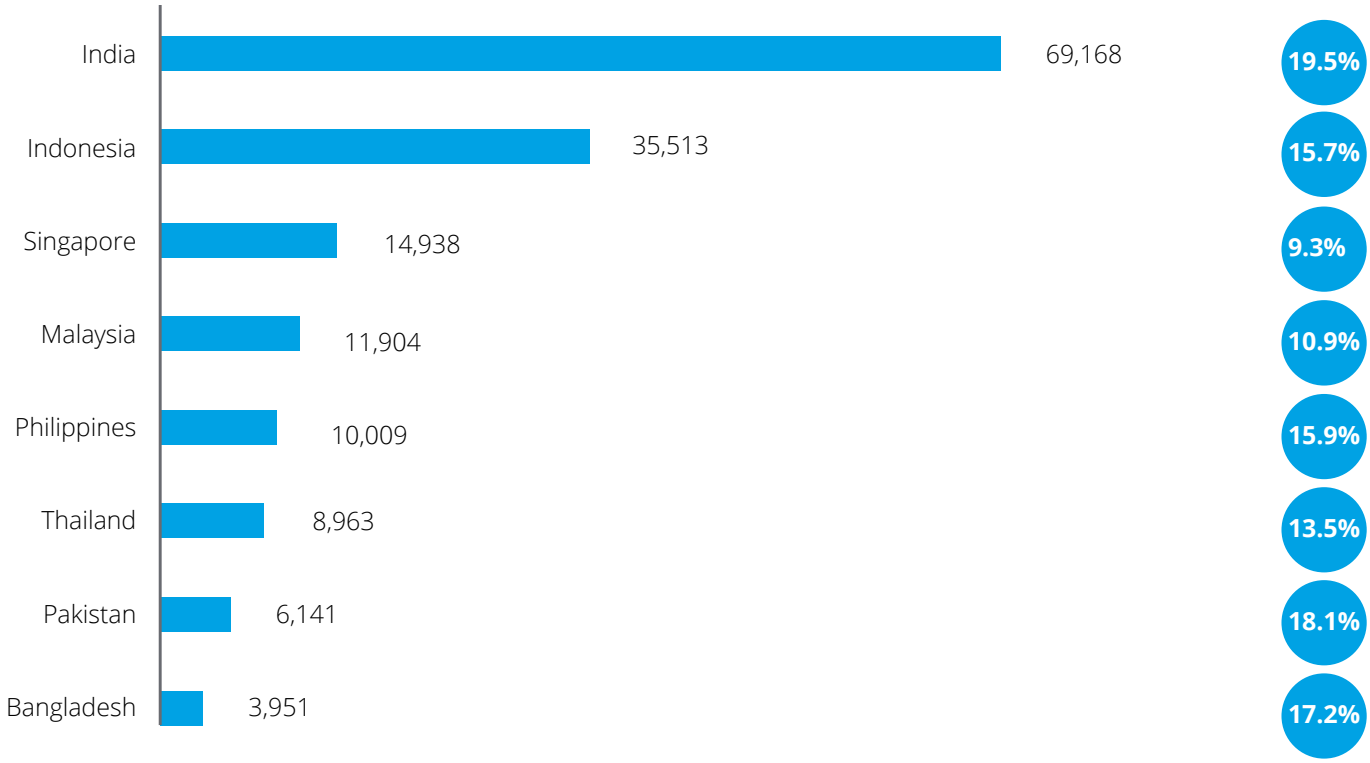
Overall, with the exception of Singapore, South and Southeast Asia feature underdeveloped financial systems and an insufficient supply of traditional financial services, which together with their huge gaps in urban-rural Internet development create large space for increasing the popularity of digital payment. But, in a very positive development, several national governments have launched basic digital hardware projects to accommodate 4G and 5G networks, creating broad prospects for the financial technology sector in South and Southeast Asia, and setting the stage for increases in digital payment volume. This also highlights the fact that numerous needs have not yet been met. If these needs are met, the massive potential of South and Southeast Asian digital finance will be unleashed.

Chart 12: Digital payment users in South and Southeast Asia (2020, 100 million people)



Source: Statista

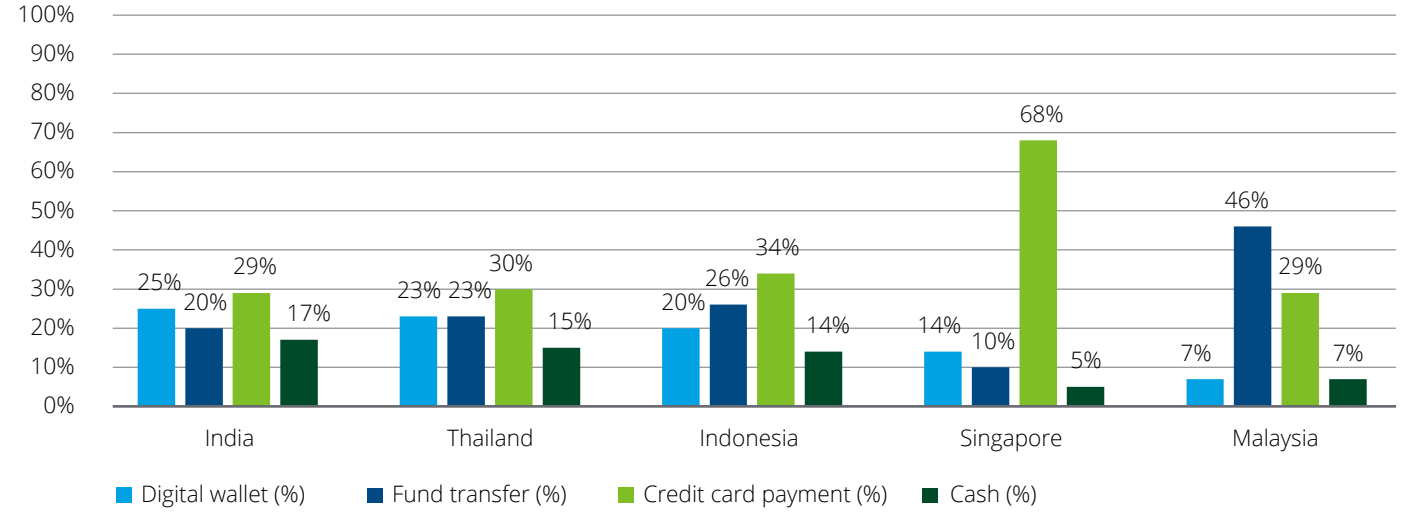
Chart 13: Value of digital payment in South and Southeast Asia (USD million) and expected 2020-2024 annual CAGR(%)



Source: Statista

Digital payment the new conduit for flow and value. With the sharp rise in Internet and smartphone popularity, maturing digital payment operability, lower transaction costs and greater convenience, digital payment transactions accounted for a large portion of fund flows for the first time in 2019, and the flow of new funds into digital payment is inexorable. For customers, this marks a shift from traditional payment using cash to digital payment; for the digital payment sector, the constant entrance of more digital products into the hands of low-income users makes it vital to ensure these are user-centric, relevant and able to meet real needs.

Chart 14: Digital payment preferences in Southeast Asia



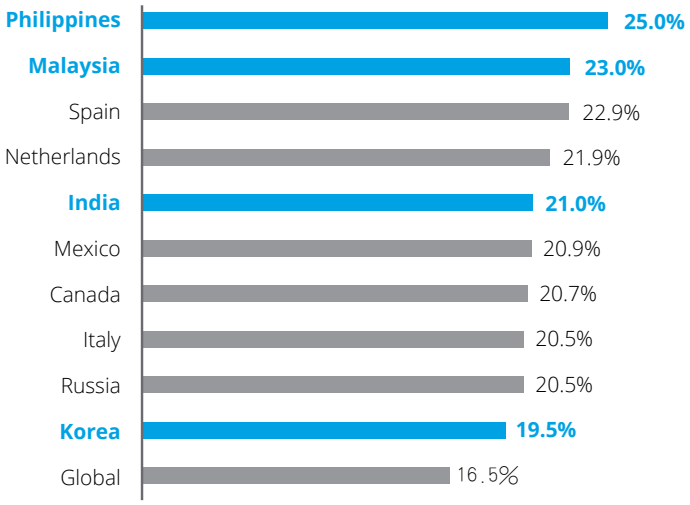
Source: JPMorgan

Mobile e-commerce has become the cornerstone of digital life. Asia leads the world in term of popularity and growth of e-commerce, with billions of people already shopping online. Driven by Southeast Asia's increasing number of Internet users, growing familiarity with online shopping and consumers' reinforced payment capability, the region's spending on e-commerce will continue to achieve double-digit growth in coming decade. Asia has four countries in the 2020 global top 10 for e-commerce retail volume: China (1st), Japan (4th), South Korea (5th) and India (8th), and four of the top 10 e-commerce growth rates: the Philippines (25.0%), Malaysia (23.0%), India (21.0%) and South Korea (19.5%)[2] .

Top 10 forecasted countries in e-commerce retail sales in 2020

Billion	2019	2020F	Percentage increase
China	1801.53	2089.78	16.00%
United States	601.65	709.78	18.00%
United Kingdom	133.92	153.61	14.70%
Japan	123.45	130.61	5.80%
Korea	87.08	104.06	19.50%
Germany	79.47	92.33	16.20%
France	66.00	77.27	17.10%
India	42.58	51.52	21.00%
Canada	32.49	39.22	20.70%
Spain	26.77	32.89	22.90%

CHart 15:Top 10 countries by e-commerce retail growth



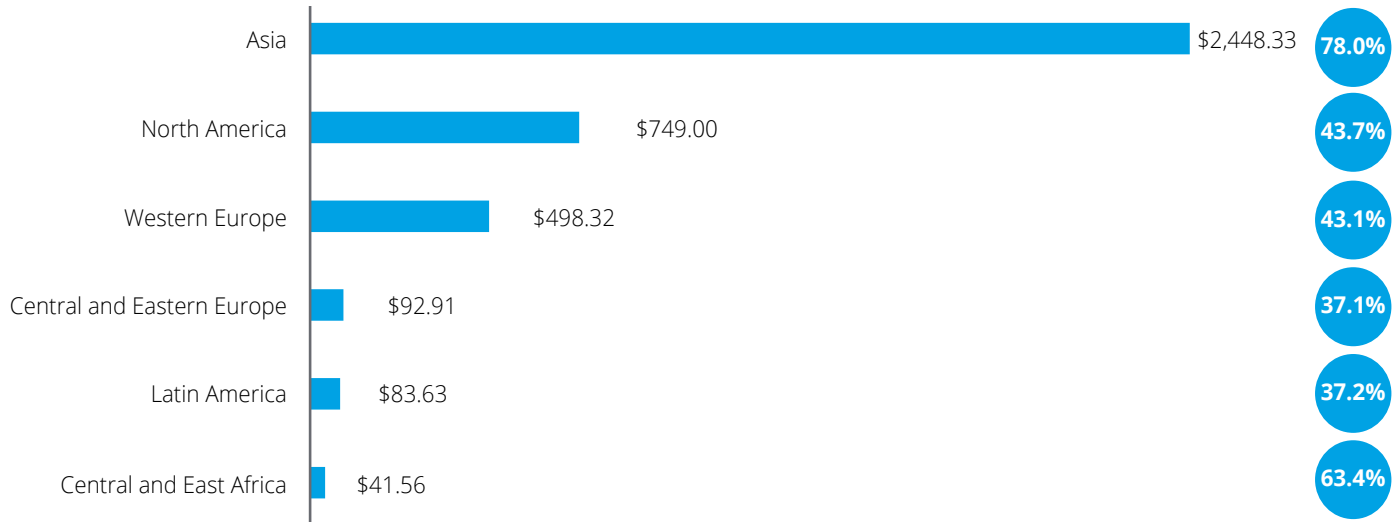
Source: eMarketer

Users in emerging Asian markets are much more inclined to use mobile e-commerce than their counterparts in developed economies. As of 2020, 81.5% of e-commerce activity in China is through mobile devices. This is because most consumers first came into contact with e-commerce through mobile devices. The proportion of e-commerce through mobile devices is 80% in India, 75.3% in Thailand and 64% in Indonesia. But the developed economies of Asia-Pacific show a different pattern: In Japan, only 46.2% of e-commerce takes place via mobile phones and in Hong Kong it is only 41.6%. These figures are closer to those of the United States (44.3%), the UK (50.8%) and Germany (41.5%).

Asia has the world's highest proportion of mobile phone e-commerce. Asia's USD2.448 trillion of e-commerce retail sales are set to account for 62.6% of the global total in 2020, with mobile phone e-commerce accounting for as much as 78%. It is estimated that, by 2024, sales in Asia will exceed USD4 trillion and account for 65.9% of the global market. This will benefit the development of an e-commerce ecosystem. Asia also leads the world in number of e-commerce users, growth rate, penetration rate, total sales, sales of mobile e-commerce and social e-commerce.

[2]Global Ecommerce 2020, Emarketer

Chart 16: Global e-commerce sales (USD billion) in 2020; mobile phone e-commerce as proportion of total e-commerce



Source: eMarketer

Interconnecting digital finance

Digital payment is shifting assets towards digitalization, which will strengthen financial inclusion and leverage technology to achieve interconnection in digital finance. A digital wallet is a tool for storage and management of private keys. Its most fundamental function is the management of digital assets. In addition to their basic payment functions, digital wallets are now deploying value-added functions, involving banking, financial management, payment, insurance, credit inquiries, consumer finance, loans and funds. For the digital payment industry, "payment as a platform" is encouraging the digitalization of more financial asset and causing business models to diversify.

Digital finance is the strongest engine of the new economy. It is a new financial paradigm created from the participation of technologies including Internet+, big data, cloud computing and artificial intelligence (AI) in financial industry processes, evidencing the future direction of financial innovation and development. The operation models, service models and even the entire ecology of traditional financial services will be transformed. Payment + digital finance + services via technical enablement exemplifies this trend. Fintech uses mobile terminals and big data analysis to provide tens and even hundreds of millions of customers with services including payment, investment, insurance and loans, bringing unprecedented change to the financial industry.

Accelerated adoption of "zero contact" digital payment since the pandemic

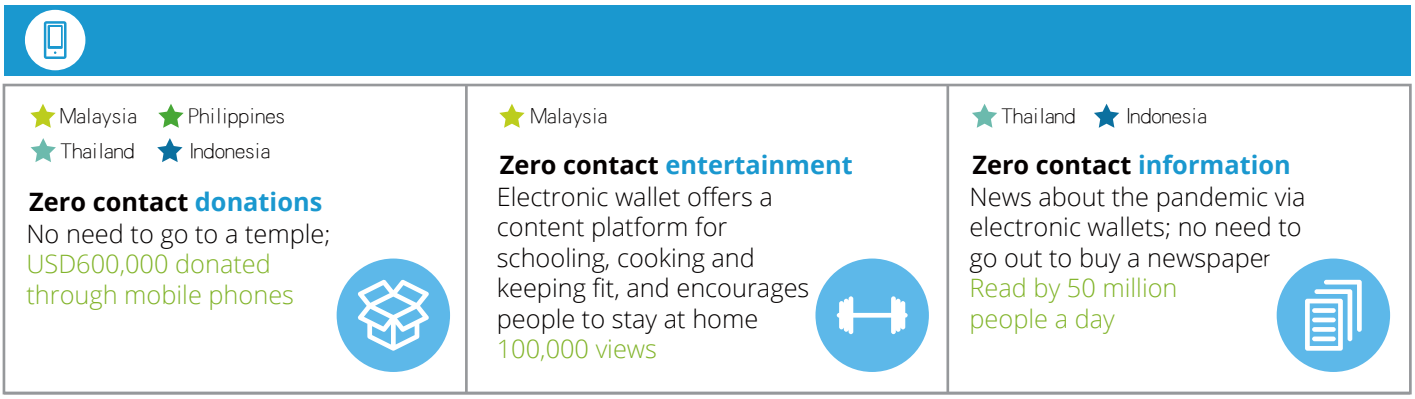
When the COVID-19 crisis emerged, digital payment showed benefits including the avoidance of contact with currency to ensure safety and hygiene. Its penetration rate quickened and triggered a sharp rise in digital payment. When people had to stay at home to fight against the pandemic, "zero contact" payment helped address their difficulties and improve quality of life. The practices used during its extensive application in China in February and March is now being copied and quickly adopted in Southeast Asia.

In Southeast Asia, COVID-19 changed the traditional consumer mindset that "only money in the hand is real". Zero contact payment became essential to fighting the epidemic and proved indispensable for a wide range of purposes, e.g. online shopping, payment of utility bills and ordering takeout food. Continuous innovations have been made in zero contact payment platforms to provide more services during the epidemic, including wage payment, donations and entertainment.

In Malaysia, Thailand, Indonesia and the Philippines, local users showed their care for others by making zero contact donations of more than USD600,000. Through public welfare organizations, these online donations provided instant help to disadvantaged groups, including for purchases of food, masks and other protective clothing. In India and Indonesia, nearly 50 million people a day used their electronic wallets to read about developments in the pandemic without the need to go out and buy a newspaper[3].

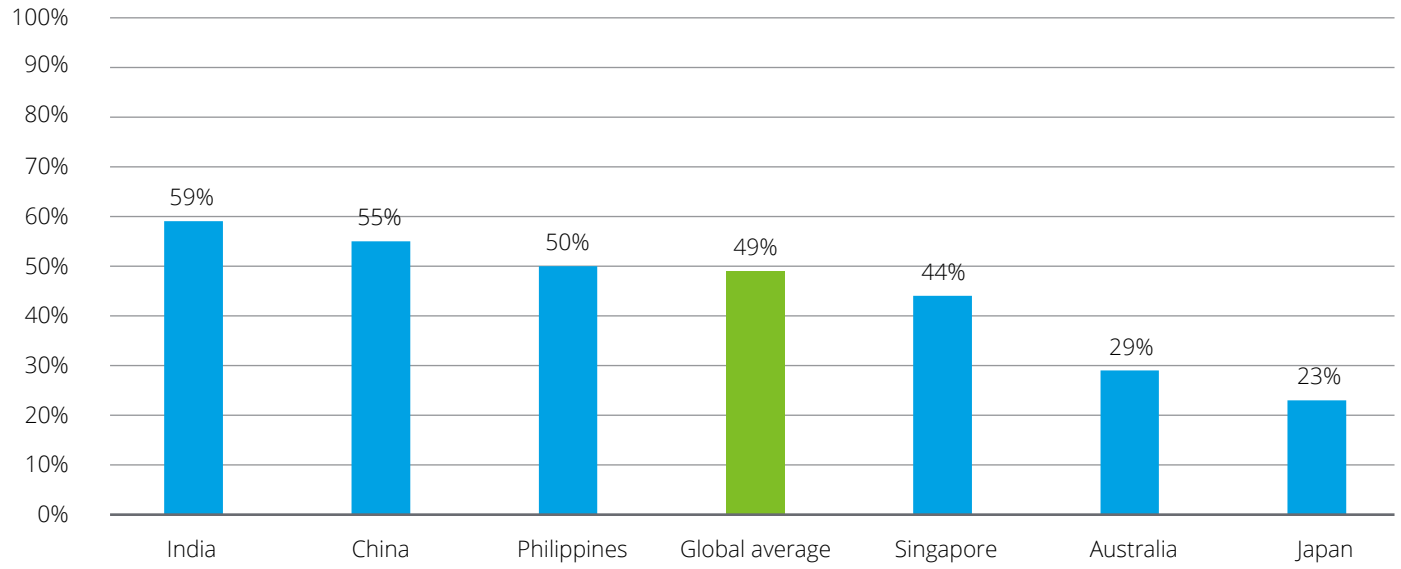
[3]Moneycompass, *Contactless innovations keep the world moving amid COVID-19*, April 2020

Chart 17: Application of e-wallets during the epidemic



Meanwhile, more consumption has moved from offline to online platforms, causing a sharp rise in online consumption and digital payment use.

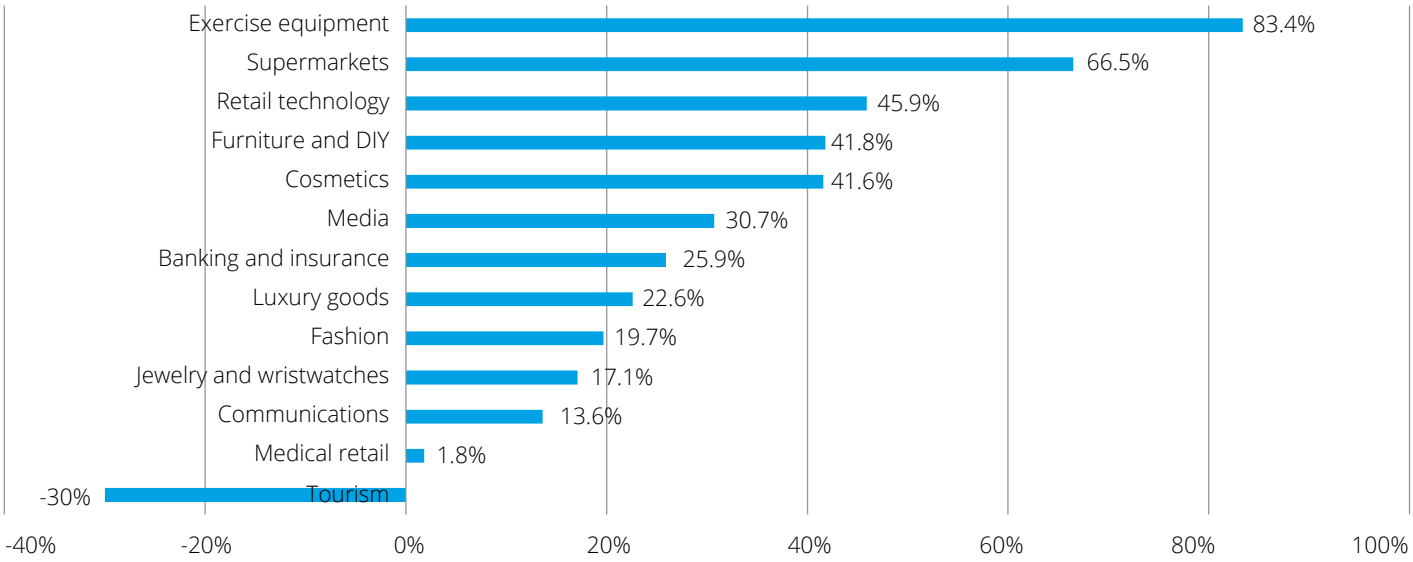
Chart 18: Respondents aged 16-64 who said online consumption has increased since the pandemic (July 2020)



Source: Datareportal

Increases were chalked up in nearly all types of e-commerce transactions compared to before COVID-19, with sports equipment and supermarkets registering particularly strong growth.

Chart 19: Impact of pandemic on categories of e-commerce in South and Southeast Asia



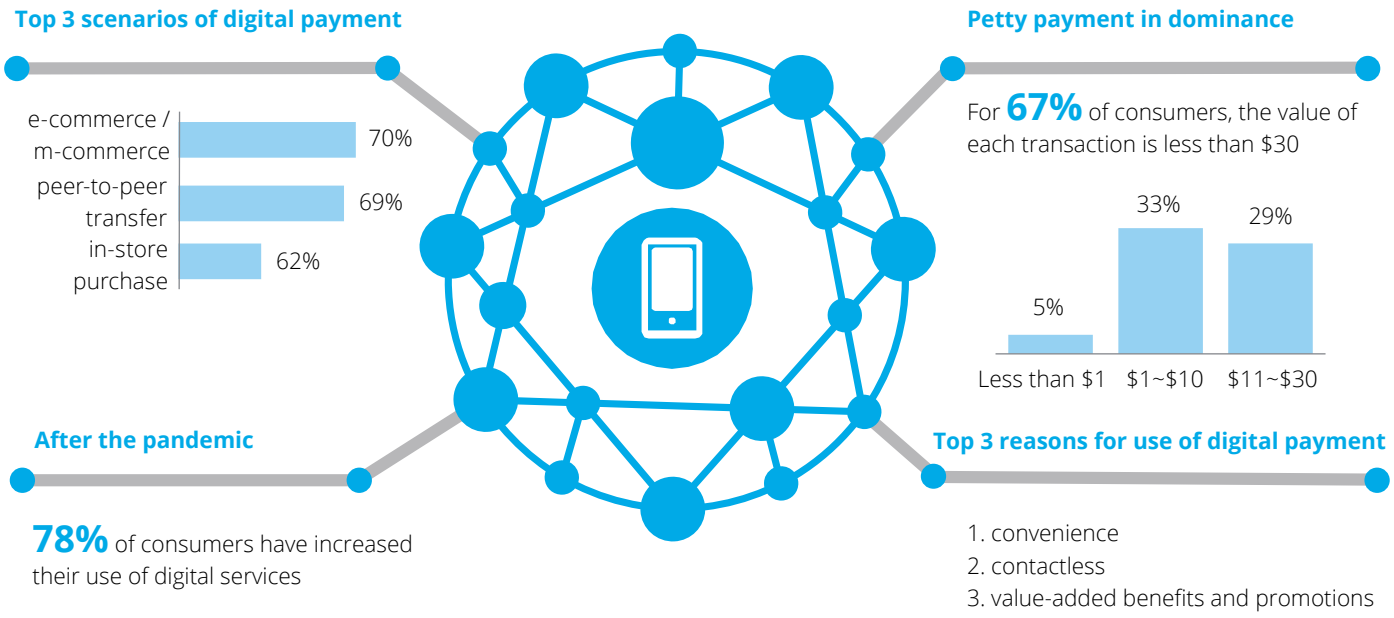
Source: Datareportal

Chapter II Digital life consumer portraits

Characteristics of Digital Life

Through our survey of people across age groups in the eight countries (India, Indonesia, Malaysia, Thailand, Philippines, Bangladesh, Pakistan and Singapore), we found that young adults aged 21-40 lead the richest digital lives in terms of the variety of digital life use scenarios. Digital payment as a key enabler is creating and connecting digital life for consumers, making a fundamental shift in social interactions, financial services, digital entertainment, daily life services and shopping habits.

Chart 20: Portrait of digital payment in South and Southeast Asia



Source: Deloitte Research

The survey also uncovered regional trends in the digital lives of people in South and Southeast Asia, which are summarized below:

- **E-commerce/m-commerce, peer-to-peer transfers and in-store purchase are the top three digital payment scenarios.** 70% of respondents use a digital wallet for e-commerce/m-commerce shopping; 69% for money transfers between friends; and 62% for payment in offline retail shops;
- **Digital wallet use is driven by its nature of convenience, contactless and encouraged by value-added benefits and promotions.** The main reasons for choosing a digital wallet: 77% of respondents use digital wallets due to convenience; 69% to avoid contact with banknotes; and 9% for the additional discounts available;
- **Small payments dominate.** For 67% of consumers, the value of each transaction is less than USD30. It ranges from USD1-USD10 for 33% and from USD11-USD30 for 29%;
- **For those who shop online frequently, quality and merchant reliability are the main concerns.** 52% of consumers are worried about low product quality and 52% the reliability of online merchants;
- **The use of digital services has increased since the pandemic.** Since the pandemic, about 78% of the respondents have increased their use of digital services, including 41% who have increased it substantially;
- **Films and videos, social media and music streaming are the most popular digital entertainment.** Some 79% of respondents opted for films and videos as their most favored mode of digital entertainment, followed by social media (76%) and music streaming (59%). Each month, 42% spend USD10 or less on digital entertainment and 38% spend USD11-USD30;
- **APPs for social media, e-commerce and daily life services are the three most common mobile phone APPs.** Social media is favored by 79% of respondents, 74% use e-commerce APPs regularly and 59% use daily life service APPs;

Regional differences in digital payment

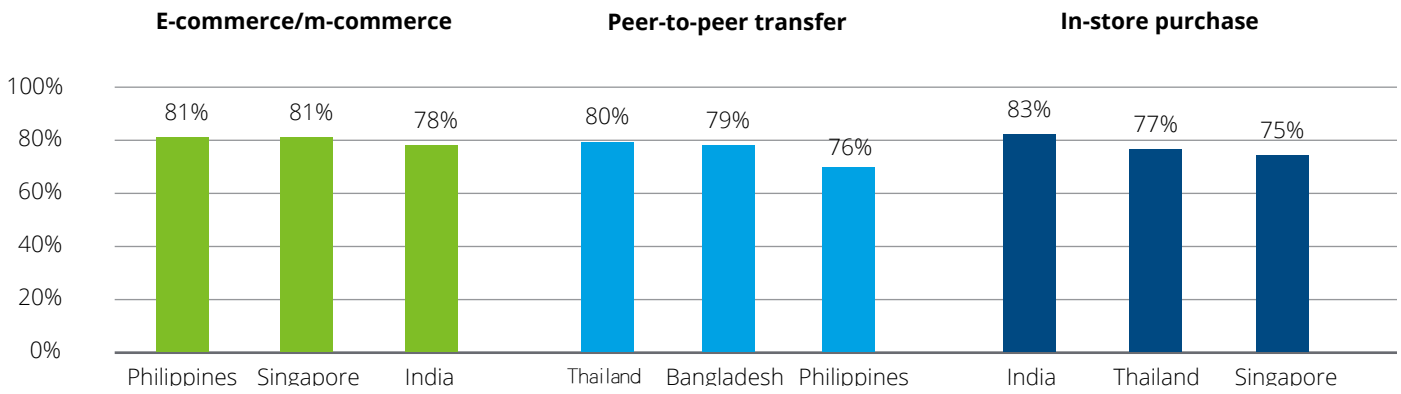
Singapore, the Philippines and Indonesia are the three countries with most vibrant online shopping scenes. In Pakistan, overall digital life is less developed, as shown by its highest proportions of people who have never shopped online and retail shops that do not accept digital payment.

The attractions of digital payment

e-commerce/m-commerce, peer-to-peer transfers and in-store purchase are top three digital payment scenarios

The developing countries of South and Southeast Asia have high mobile phone usage and connectivity, but low bank penetration rates. This makes digital payment hugely attractive. Since only a small number of people hold bank accounts in these countries, financial technology companies have a great opportunity to use digital platforms to provide financial services that are reasonably priced and convenient. E-commerce/m-commerce, peer-to-peer transfers and in-store purchase are the top three scenarios for digital wallet use. Payment for travel and public services remains at an exploratory stage, with a low number of payments and small user scale.

Chart 21: The top three countries' most common application scenarios

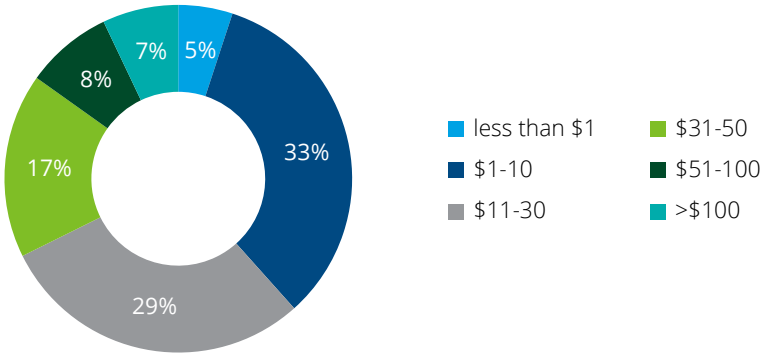


Source: Deloitte Research

Petty payments dominate

Individual digital payments range from USD1-USD10 or USD11-USD30 for 33% and 29% of respondents respectively. The convenience of contactless payment is encouraging its growing use in convenience stores, for travel, adding game minutes and among roadside vendors seen across the eight countries. These have become the "access point" for people's participation in digital life.

Chart 22: Single digital payment amounts (USD)

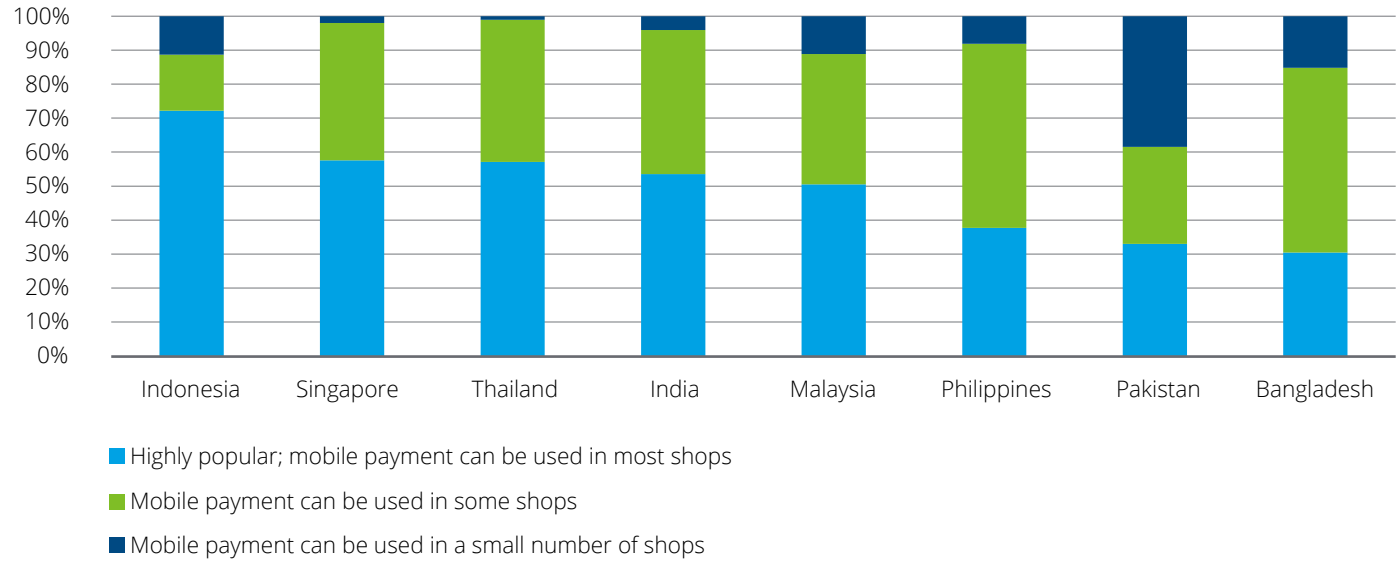


Source: Deloitte Research

Reasons for choosing a digital wallet

The top three reasons South and Southeast Asia citizens use a digital wallet are convenience, contactless and additional value-add benefits. GCash in the Philippines, Easypaisa in Pakistan and bKash in Bangladesh all helped the local governments issue welfare payments. Acceptance by retailers is also key to the adoption of digital wallets. The survey found that in Indonesia, digital wallets can be used extensively in retail shops, but in Pakistan they can be used only in a few shops.

Chart 23: Popularity of electronic wallets in retail shops



Source: Deloitte Research

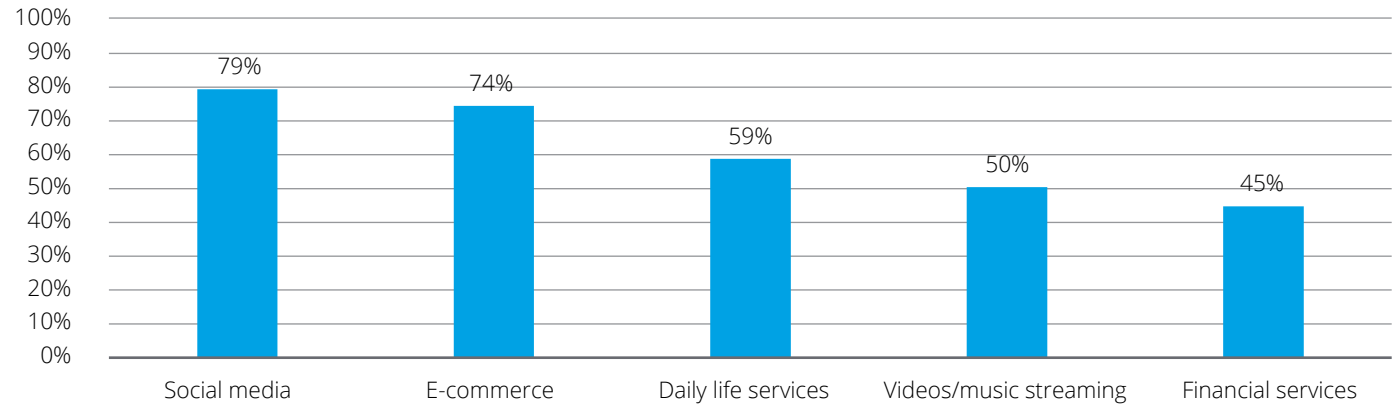
Digital Life Habits

Mobile APPs actively used in different scenarios

The most popular mobile phone APPs are those for social media, e-commerce, daily life services, videos and music, and financial services. Increasing user flow rates and activity have made social networking the major channel for attracting customers.

In 2020, amid the impact of the pandemic, the "home economy" witnessed explosive growth.

Chart 24: The five most popular APP categories



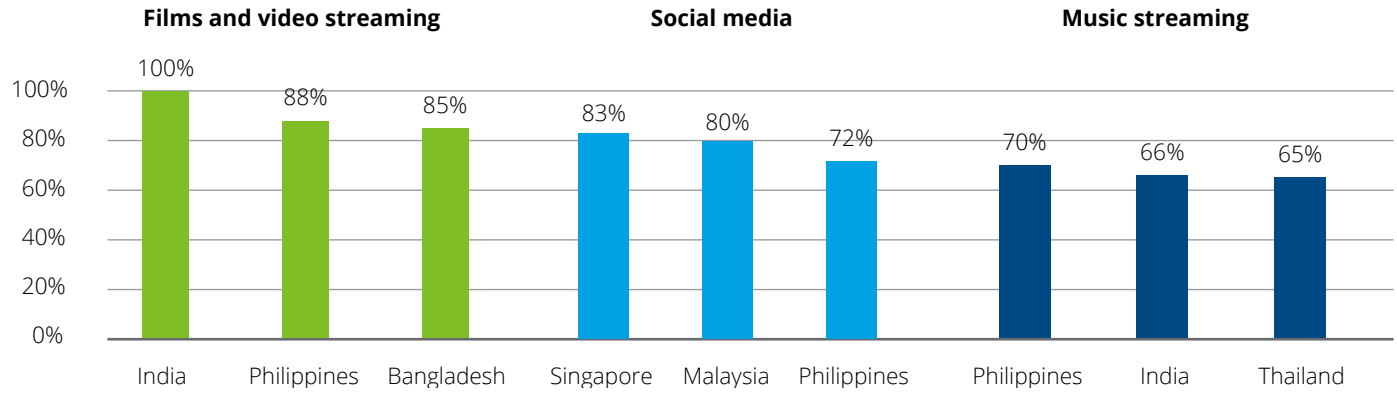
Source: Deloitte Research

Diversified modes of digital entertainment

Films and videos, social media and music streaming are most favored modes of digital entertainment among young people

The rapid development of digital technology and emergence of the service economy have caused digital entertainment consumption to surge. Further development of digital technology will lead to its deeper integration with traditional entertainment and the continuous expansion of the digital entertainment industry. Digital entertainment content will show an even more obvious trend toward diversification and use by everyone; digital payment consumption patterns will take shape; market development will become increasingly standardized and mature.

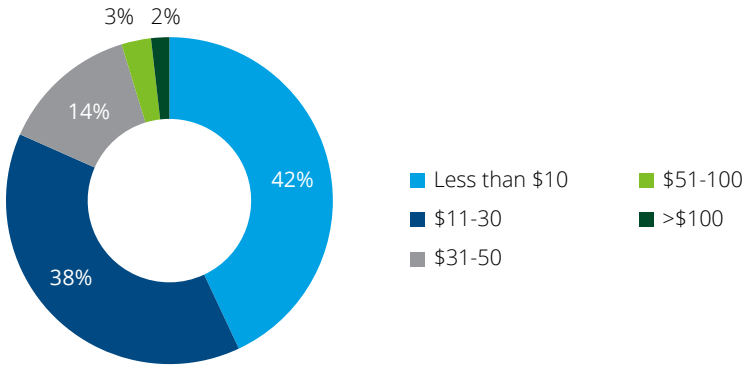
Chart 25: The top three countries' most popular modes of digital entertainment



Source: Deloitte Research

Monthly expenditure on digital entertainment is less than USD10 for 42% of respondents and USD10-USD30 for 38%, showing the dominant position of small payments. This trend has infiltrated daily life including eating, clothing, accommodation and travel.

Chart 26: Monthly expenditure on digital entertainment (USD)

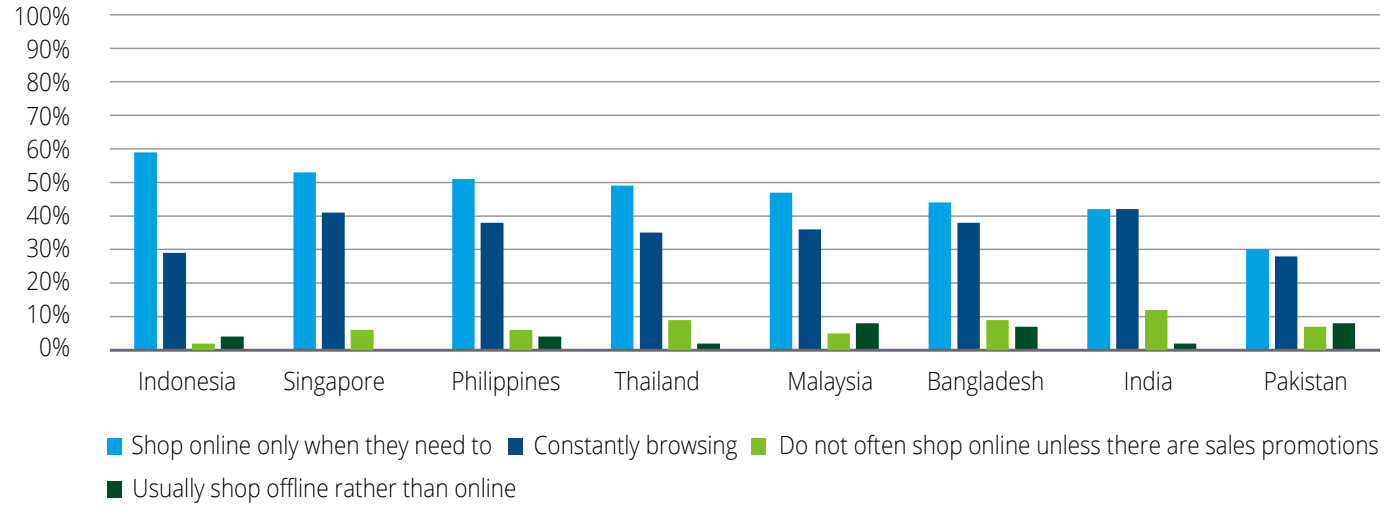


Source: Deloitte Research

Dedication to online shopping garners momentum, but concerns remain

Most respondents will shop online only when they need to. In Singapore, Indonesia and Philippines, a large proportion of people shop online. Pakistan has the largest proportion of people who have never done any online shopping, accounting for 25% of the population. In 2019, people saw e-commerce enterprises start to expand from large cities to tier-2 cities and rural areas where e-commerce penetration rates were lower, spurring consumer groups with great development potential. Southeast Asia presents huge opportunities for e-commerce, but still faces challenges including logistics, payment, product quality and user services.

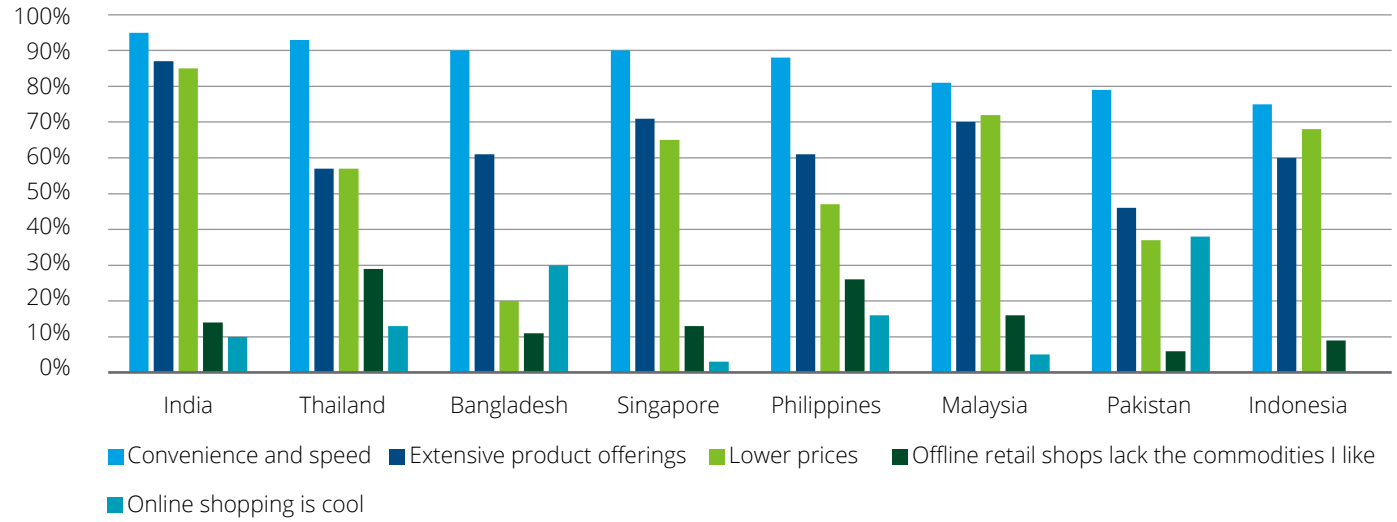
Chart 27: Attitudes towards online shopping in South and Southeast Asia



Source: Deloitte Survey

Convenience and speed, extensive product offerings and lower prices are the top three reasons people shop online. Convenient and easy interaction, more extensive product choices and better prices due to competition are clearly what makes online shopping most appealing to consumers.

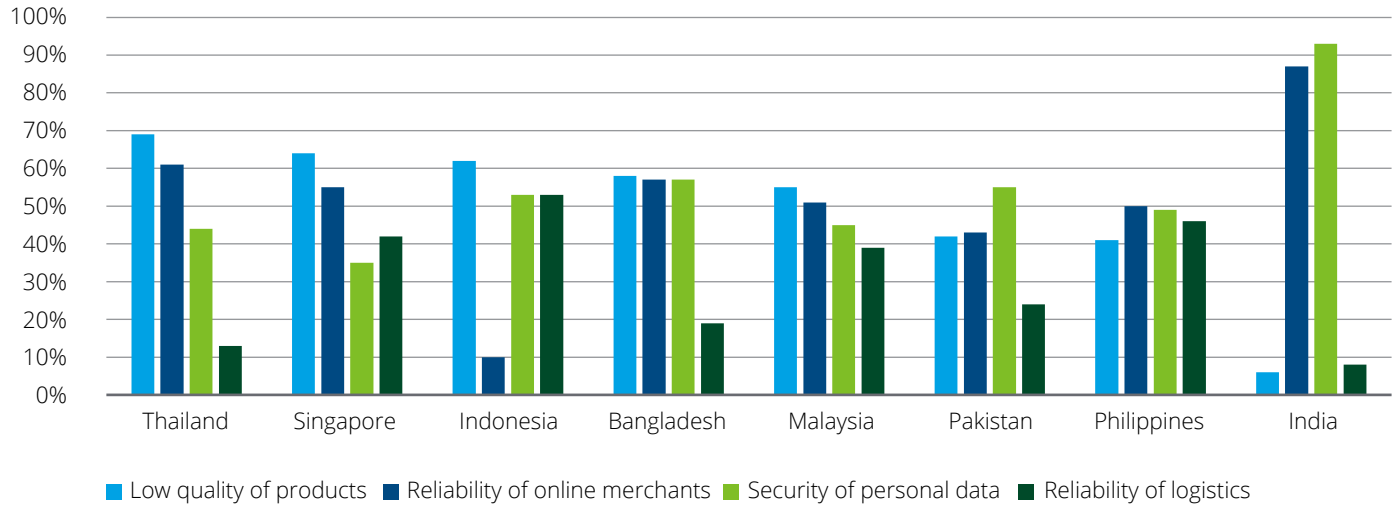
Chart 28: Reasons for shopping online in South and Southeast Asia



Source: Deloitte Research

As for people's reluctance to shop online, respondents in most countries cite the low quality of products and the reliability of online merchants as major adverse factors Personal data security and the reliability of logistics are other common reasons.

Chart 28: Reasons not to shop online

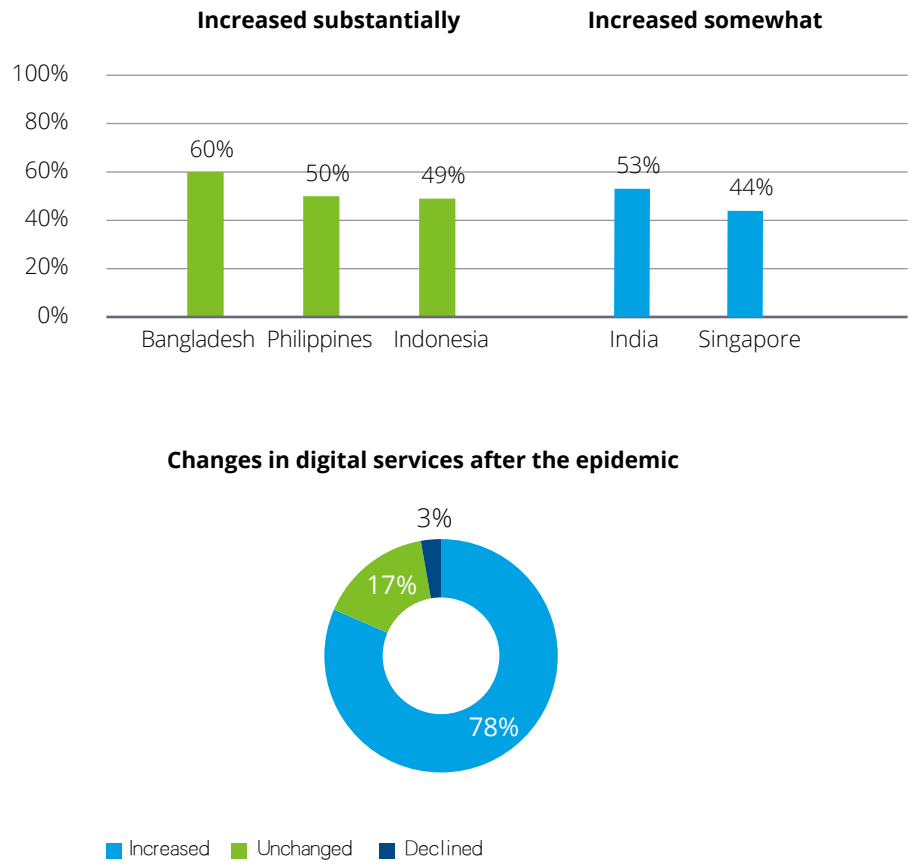


Source: Deloitte Research

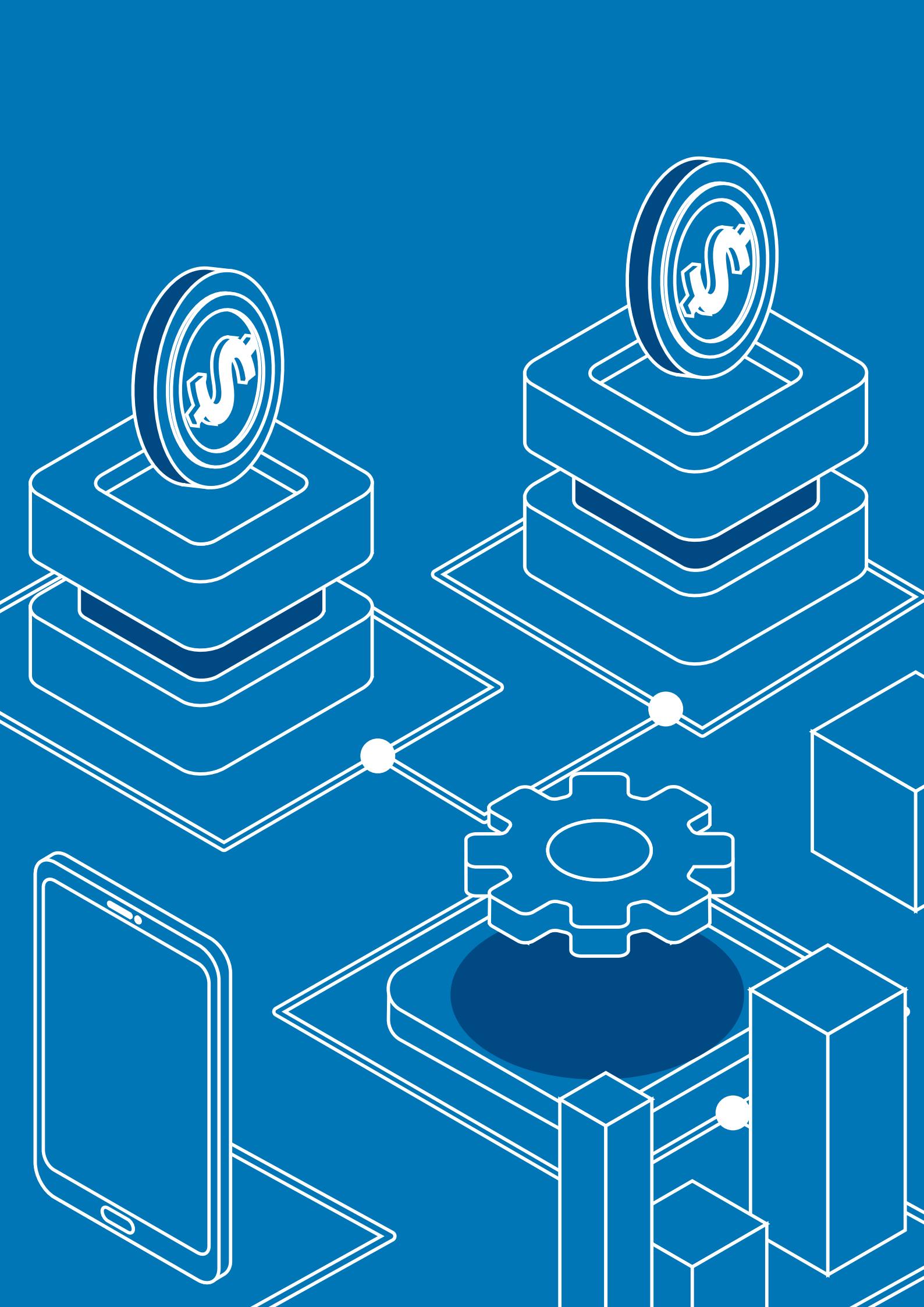
Surge in the use of digital services since the pandemic

Some 78% of respondents said their use of digital services has increased since the pandemic, with 41% saying this has increased substantially, and 37% saying it has increased somewhat. Bangladesh, the Philippines and Indonesia were the countries in which the most people cited a substantial increase. Under quarantine, people experienced an unprecedented expansion of their digital worlds, with a marked rise in demand for TV shows, online games, e-commerce, social networking, online office access and online education.

Chart 30: Changes in use of digital services since the pandemic



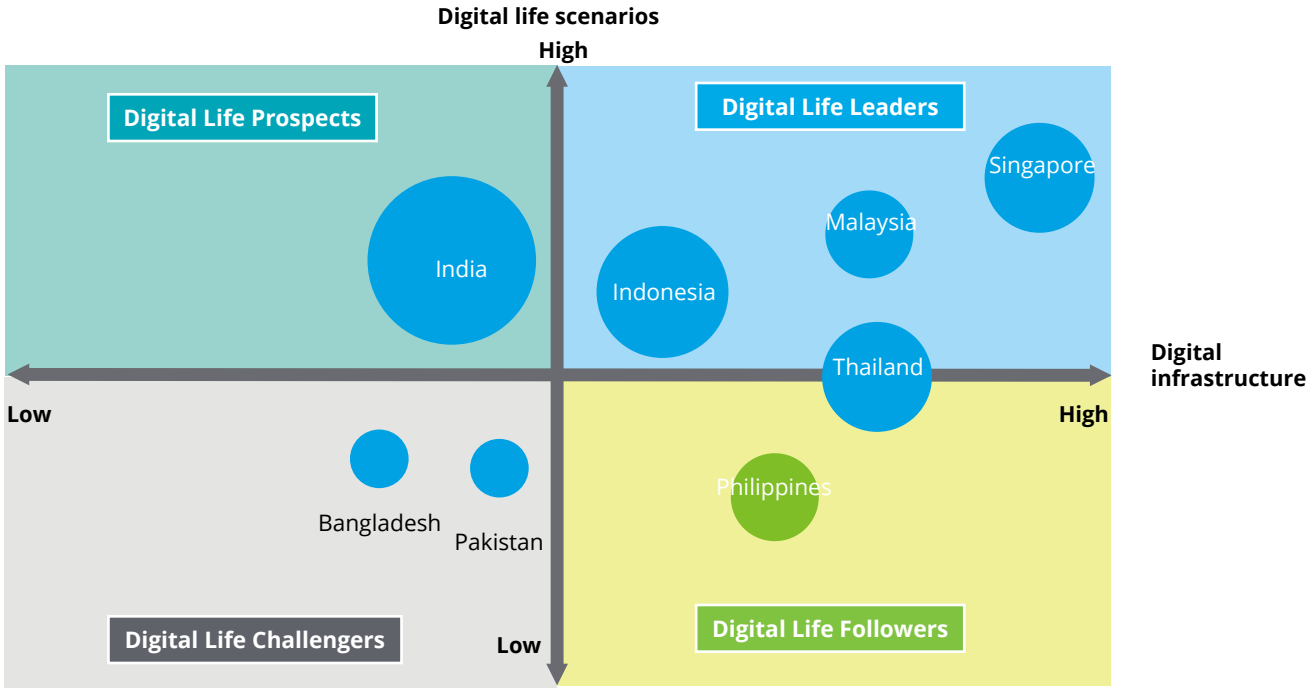
Source: Deloitte Survey



Chapter III Unique Digital Life in South and Southeast Asia

We have developed seven indicators of digital life: mobile phone penetration, mobile Internet speed, digital payment maturity, online shopping maturity, social media activity and policy support. The figure below shows each country's performance in these indicators.

Figure 31: South and Southeast Asia's leaders in digital life



The size of the circle represents the scale of digital economy.

Digital infrastructure: mobile internet speed, mobile phone penetration, government policies
Digital life scenarios: social media, ecommerce activities, digital payment
Source: Surfshark, Google & TEMASEK, GSMA, Statista, Globalweb Index, Deloitte Research

Singapore and Malaysia have become digital life "leaders". Judging from various indicators, they are leading participants in the digital economy, driven by strong government support, broad public participation and good infrastructure.

There are a group of "following" countries that are poised to catch up. Thailand is a good example. Its per capita income is relatively high, which leads to high smartphone penetration. It therefore has excellent social media activity, maturity of online shopping and digital payment indicators. The penetration rate of mobile phones in the Philippines needs to be improved, but it has strong advantages in digital money transfer, e-sports live broadcasts and other segments. Although digital applications are not as rich as in leading countries, the digital economies in follower countries are on the verge of expansion. With good digital foundations and effective policy promotion, they are rapidly approaching the leading countries.

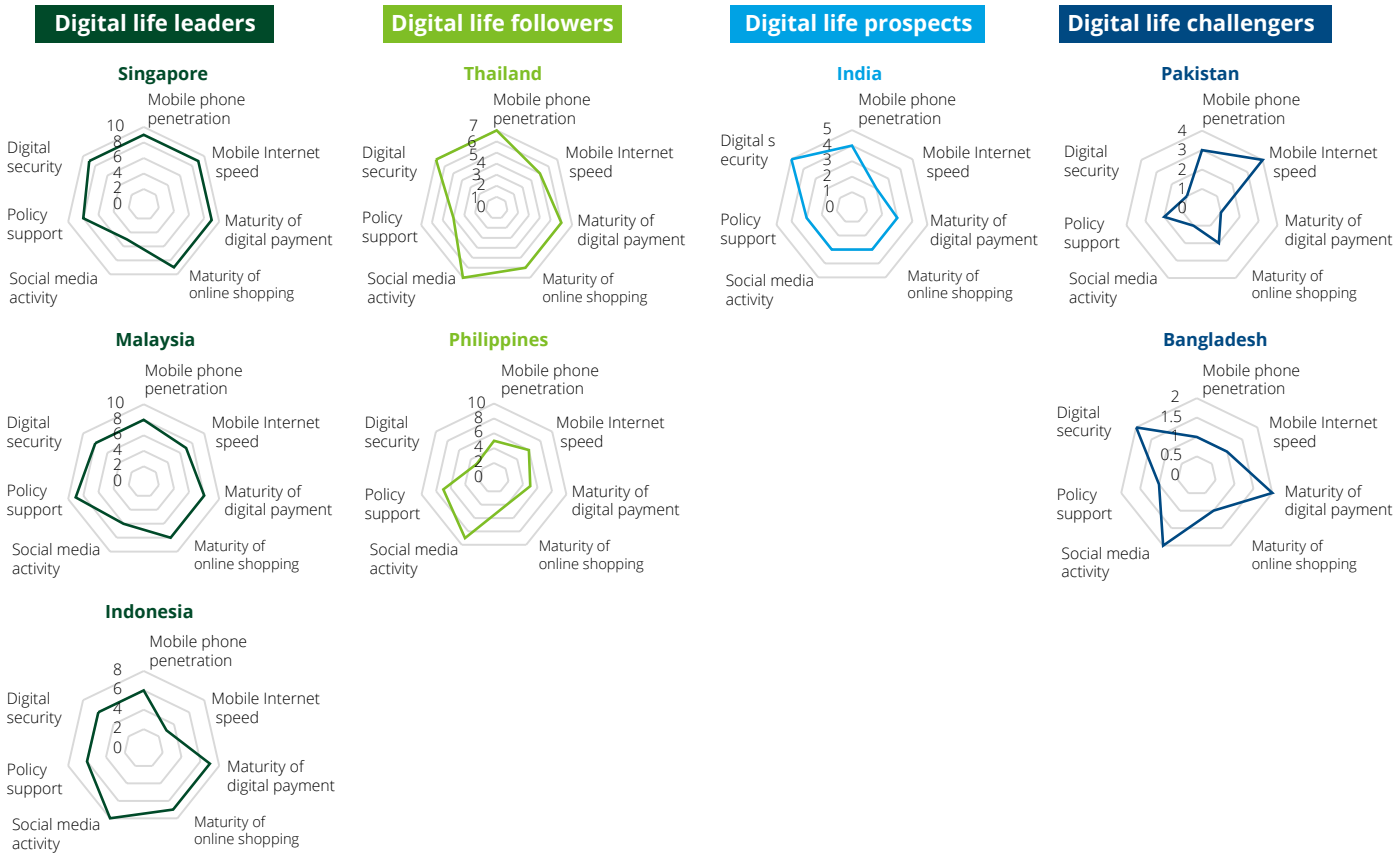
India has outstanding achievements in some indicators, especially network security. However, due to its large gap between the rich and the poor, India

still faces some practical problems, such as slow Internet speed and a preference for cash payment, which means its indicators are low compared to the follower countries. However, India's sound digital payment system and recently issued "decreasing paper money" policy evidence its great potential. After improving its digital payment acceptance and infrastructure, India can become the next digital power.

Bangladesh and Pakistan in South Asia's are the countries with the farthest to catch up in digital life. Due to slower social and economic development, their digital infrastructure and mobile phone penetration rates are some way behind those of other countries. But this does not mean they are digital life "deserts". On the contrary, some of the digital services rooted in their national conditions have become vigorous sources of economic development.

Bangladesh's inclusive digital finance, which is committed to serving low-income people, and Pakistan's B2B and B2C e-commerce models, have great vitality. As their digital infrastructure improves, and amid the influence of China and other leading countries in the digital economy, these "challenger" countries will become a new and huge potential market for the digital economy in Southeast and South Asia.

Figure 32: Digital life segmentation indicators for South and Southeast Asia countries



Source: Deloitte analysis

Digital Life "Leaders"

Singapore: Exemplary digital model for developed countries

As a developed country in Southeast Asia, Singapore is a well-known international financial center. Its economic development has been at the forefront in Asia, and it is known as one of the four "Asian Tigers". This economic strength makes it an Asia Pacific digital life "leader". From the perfection of its infrastructure, plethora of applications, and penetration of various facilities and equipment, to its digital life richness and participation rate, Singapore is at the forefront in Southeast Asia, and remains on a strong trajectory.

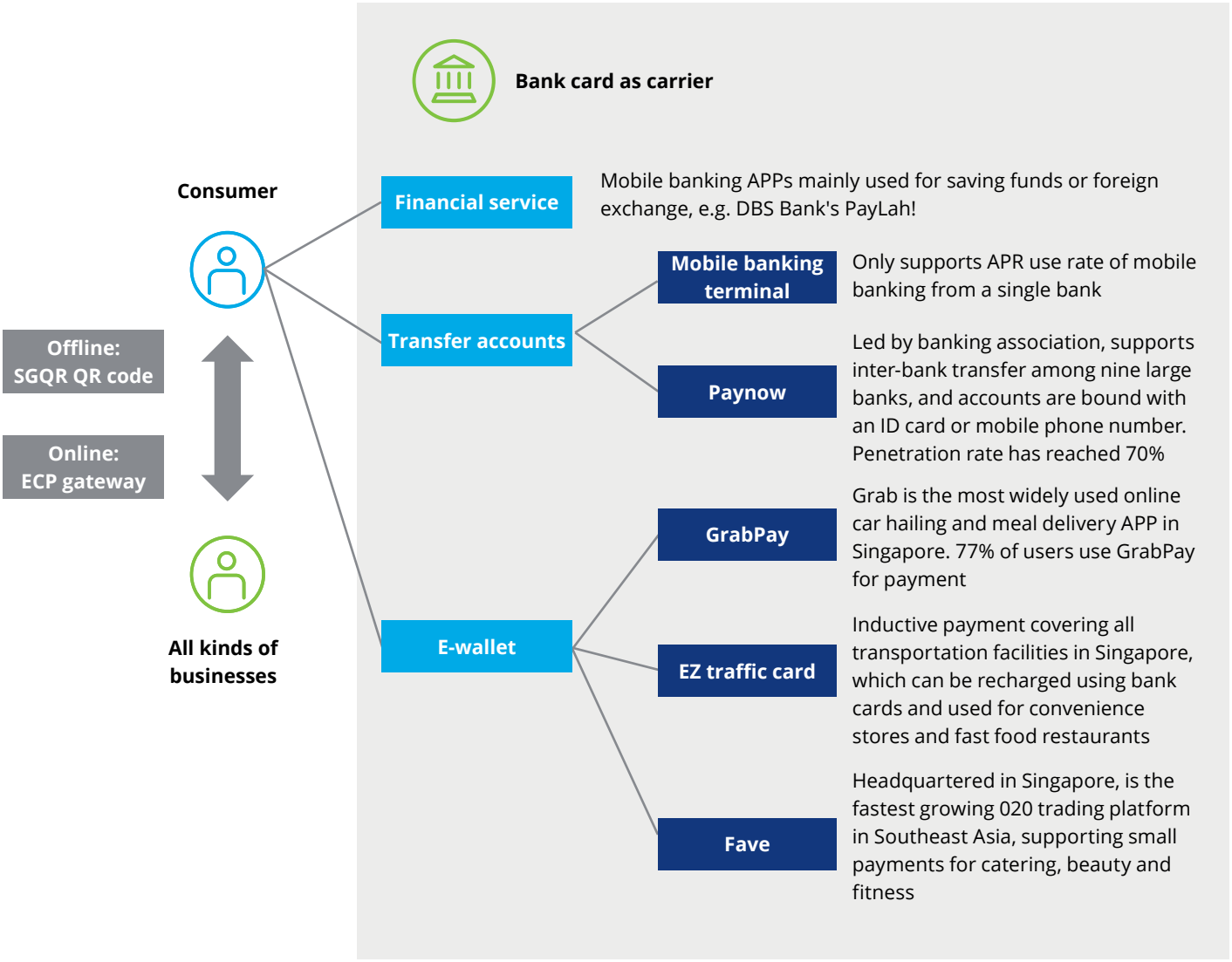
Powerful banking system backs digital payment

Singapore has a high penetration rate of banks and bank cards. Local and overseas banks provide services in Singapore, with 3.3 bank cards per capita[4]. In such a developed banking and financial system, cards were the most typical payment method before the advent of digitalization. All kinds of bank cards have good user bases, which has made the implementation of bank-based digital payment extremely smooth.

Demand for digital payment among Singapore consumers, and hence the digital payment sector, covers three categories: financial services, mobile money transfer and consumption. Binding bank cards to mobile applications is the most common method of use. Digital applications do not serve the function of topping up and saving, but instead build in payment platforms to save users the time of swiping their card and the risk of disclosing information. The advantage of this kind of digital payment is that all kinds of emerging electronic financial instruments can be backed by bank credit, reducing the risk of nefarious behavior and non-performing loans. Each e-wallet can use the money in a bank account for payment, so long as it is connected to payment platforms at home and abroad. This simple bank card-centered payment mode reduces the risk of default and bankruptcy, and makes supervision easier.

[4]Overseas Local Payment, *State of Payment in Singapore*, 11 June 2020

Figure 33: Singapore's bank-centered digital payment system



Source: Deloitte analysis

First country to launch unified QR code with multiple other achievements in digital life

In payment, Singapore is at the global forefront. In 2018, SGQR (Singapore Quick Response Code), the world's first unified payment QR code, was launched by the Monetary Authority of Singapore and the Infocomm Media Development Authority. The QR code is compatible with and integrates 27 popular payment platforms at home and abroad. Once launched and used, sellers and buyers in Singapore, regardless of their payment preferences, no longer need to search blindly for payment methods, hey only need to scan the same QR code to complete collection and payment. The convenience of this new payment method is set to boost the development of Singapore's domestic economy and tourism industry.

In Singapore's convenient payment environment, e-wallets have also blossomed, among which Grab has the highest utilization rate. Based in Singapore, Grab provides online car hailing and meal delivery services throughout Southeast Asia with electronic wallet GrabPay built-in, and 77% of users choose to use it to pay directly. This pattern makes Grab very popular among consumers. It is also very popular in China, ranking 15th in the list of Hurun's Unicorn enterprises in 2019.

In transportation, almost all Singaporeans will use EZ card, which can be topped up with bank cards or in convenience stores, and can be used to pay at fast food restaurants or convenience stores. Fave is also a popular, easy-to-use payment platform in Singapore. It is the fastest-growing O2O platform in Southeast Asia and the third most widely-used e-wallet in Singapore (behind DBS PayLah! and Grab)[5]. It attracts users through cash-back and group discounts, and includes a platform for businesses to pay and attract consumers.

Fashion e-commerce platforms and products are popular

In 2020, the population of Singapore has reached almost 6 million. Compared to other Southeast Asia countries, Singapore's high-tech development has led to a very high Internet penetration rate. E-commerce is very important to its national economy. During the second quarter of 2020, Shopee was the most visited e-commerce website in Singapore, with about 32.6 million visits[6]. Shopee is the first mobile centered online market in Southeast Asia. It was originally a market where retailers sold goods through a unified platform. Now it is available in all Southeast Asia countries. Because of recent activities like "Flash Buying Day" and "Promotion Day", in 2020Q2 it increased visits by 82%. Shopee is closely followed by Lazada and Qoo10. Founded in 2012, Lazada is a leading international e-commerce platform with a presence in six Southeast Asian countries. Founded in 2010, Qoo10 is a joint venture between Gmarket and eBay. In Singapore, Qoo10 mainly sells fashion goods, especially Korean products, and is very popular among young women.

[5]Overseas Local Payment,
[6]SimilarWeb

Table: Online shopping product transaction volume in Singapore (2019)

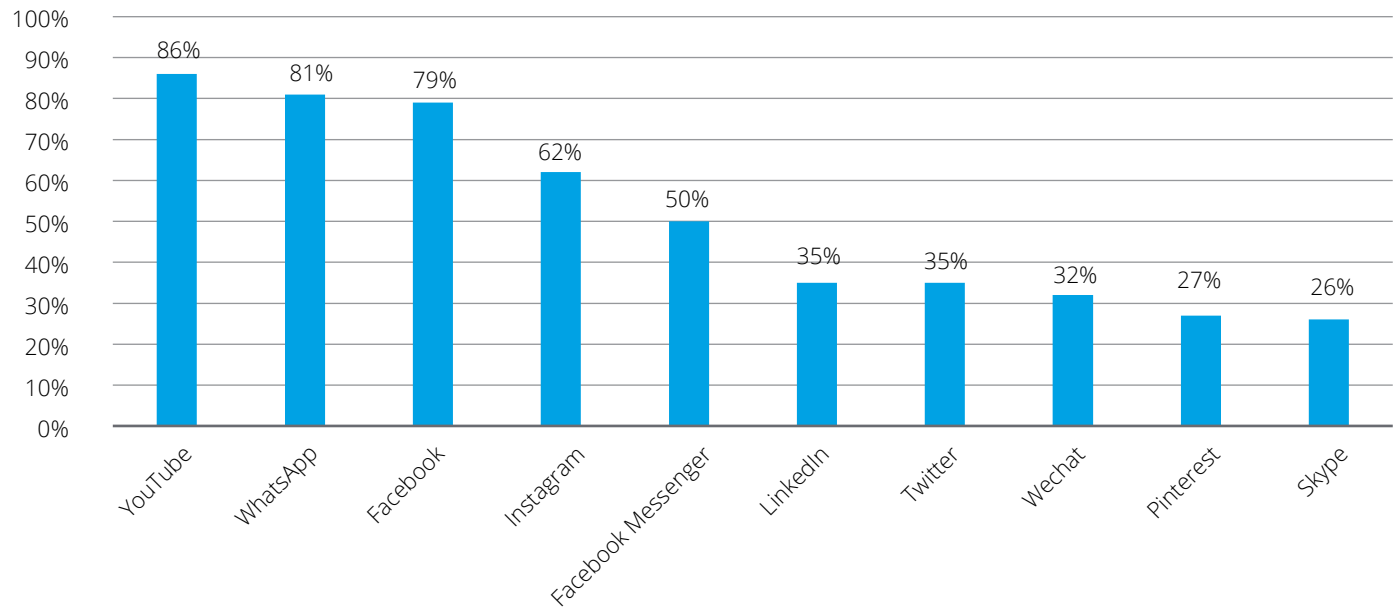
Product Type	Transaction Volume (USD)
Online travel (including accommodation)	3.641 billion
Electronic and media equipment	1.08 billion
Fashion and beauty	999 million
Home appliances	726 million
Toys and handicrafts	658 million
Food and personal care	647 million
Video games	95 million
Electronic music	26 million

Source: Datareportal, *Digital 2019 Spotlight: Ecommerce in Singapore*

Among online shopping products, Singaporeans spend the most money on online tourism and hotels, which benefit from the strong development of Singapore's tourism and foreign trade. Among commodities, the products Singapore netizens most favor are electronic and media products such as cameras, mobile phones and other equipment, with a total value of USD1.08 billion in 2019. This is followed by fashion and beauty products, on which USD999 million was spent. Singapore's online consumption habits focus on high-end products, and consumers have relatively high-level demand, as is characteristic of developed countries.

Entertainment media favored over social media

Figure 34: Penetration rate of social sharing platforms in Singapore



Source: GlobalWebIndex. *Digital in 2020: Singapore*

Singapore's most used social network is YouTube, the leading video streaming provider, followed by WhatsApp and social media giant Facebook. Singapore boasts the fastest Internet connections in Asia Pacific, and the convenience of watching YouTube and the richness of content are driving the growth of online content. Social media is also very important in the country. The total number of social media users in Singapore exceeds four million, accounting for more than 74% of the population. Although YouTube and WhatsApp remain the most popular social media channels, young Singaporean social media users are flocking to Instagram, Snapchat and TikTok[7].

Digital Life "Followers"

Indonesia: perfect payment pattern, boundless online shopping prospects

With more than 260 million people, Indonesia is the most populous country in Southeast Asia. In addition, the country is made up of more than 17,000 islands, which complicates communications between different regions. Therefore, the Internet plays an important role in promoting economic and social interests. Internet penetration has been rising for a decade, and this trend is not expected to slow down. Due to difficulties in establishing a fixed line network among the islands and the large-scale enhancement of mobile networks, smartphones are the main equipment used to access the Internet. Online communications across the country present opportunities in many digital areas, including digital payment and e-commerce. Although Indonesia's infrastructure is yet to be improved, its digital economy is unrivalled in Southeast Asia, and will promote high-quality economic development.

Digital payment covering almost every daily life scenario

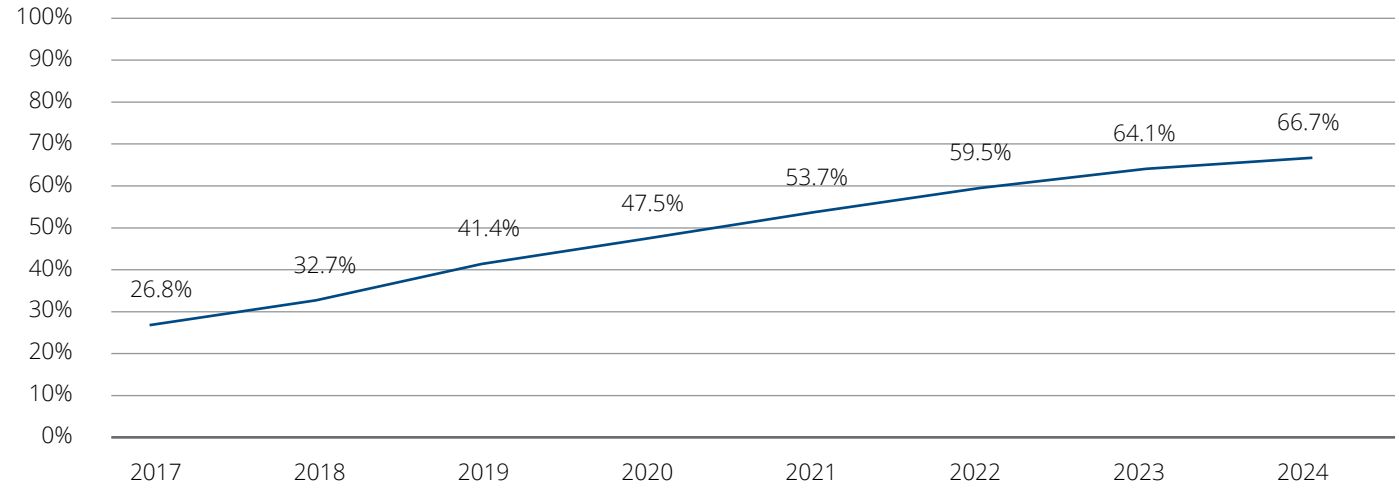
The most popular e-payment applications in Indonesia are OVO and GoPay. As a product under Indonesian giant Lippo Group, OVO has a natural advantage in acquiring cooperative merchants. Lippo Malls, owned by Lippo Group, has many shopping centers, including Hypermart and Matahari department stores, and online shopping platform mataharimall.com. The Group also runs cinemas, hospitals, schools and media platforms. Besides, OVO wallet application scenarios also includes Grab (ride hailing and take out) and Tokopedia (e-commerce platform) These rich scenarios are enough to make OVO stand out among numerous e-wallets, and almost all payments in Indonesia are through OVO. GoPay, in second place, started with online car hailing and booking and has a strong user base.

Indonesia's e-wallet market is undergoing multi-polarized development. Local e-wallets have dominated the digital payment market in Indonesia, and the services they support and provide vary. Most e-payment wallets can be used to pay water and electricity bills, and medical insurance premiums. Although Indonesia's payment system is decentralized, it covers most scenarios. It is a difficult market for new competitors to enter unless they have several attractive functions.

Various modes of e-commerce

In recent years, Indonesia's online shopping coverage has experienced exponential growth. According to forecasts, the number of online shoppers will double in coming years.

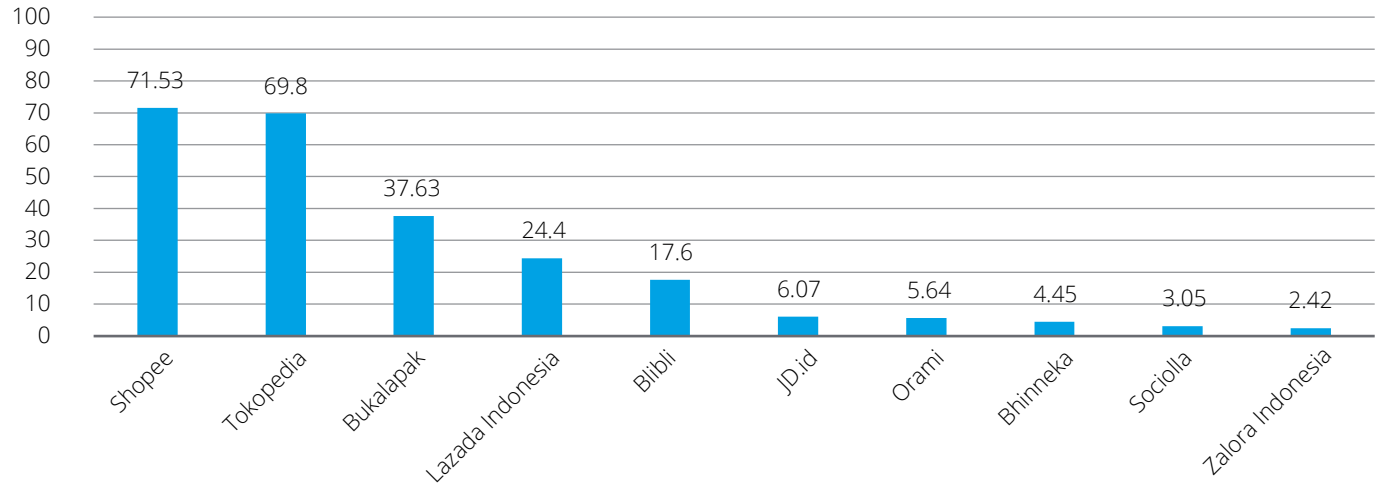
Table 35: Coverage and forecast for online shopping in Indonesia



Source: Statista, *Digital Market Outlook, December 2019*

[7]J. Muller, *Social network penetration in Singapore Q3 2019*, 19 February 2020

Table 36: Hits on e-commerce websites in Indonesia (2019, million)

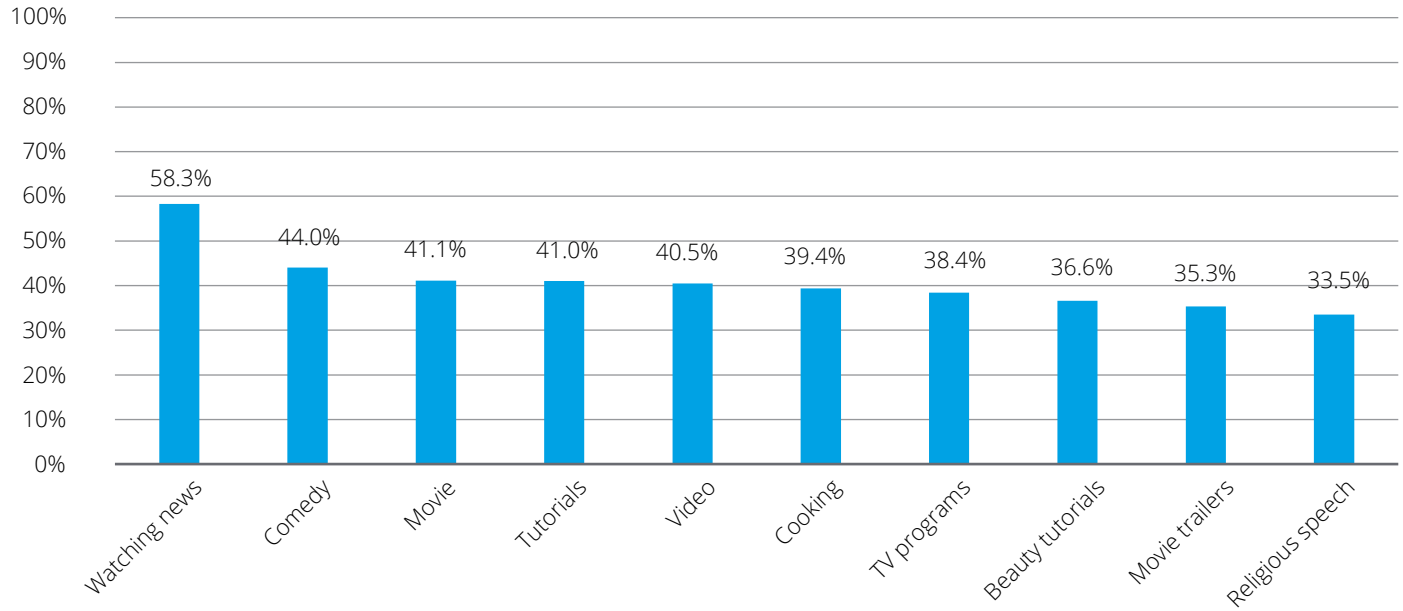


Source: iPrice Group, April 2020

Indonesia's favorite online shopping websites have various operating models and a range of functions. Strategically, leader Shopee has used its capital to attract sellers and encourage low prices to quickly establish its advantage. It is focusing on the building of Shopee Mall, which will establish various brand stores, from 2022. Tokopidia (invested in by Alibaba) is the next most used site. Lazada (Alibaba's flagship e-commerce platform in Southeast Asia), in fourth place, not only helps small and medium-sized enterprises digitalize, but also encourages brand operations. It is generally expected to witness fast growth this year due to reorganization. LazMall, the largest online brand mall in Southeast Asia, will be upgraded in September 2020. Jingdong's arm in Indonesia, jd.id, takes ninth place. Indonesia's e-commerce layout is diverse, enriching consumer choice.

Social Entertainment: Indonesians like to chat and watch news

Figure 37: Use of social platforms in Indonesia



Source: Statista, *Global Consumer Survey 2020,* May 2020

According to Statista, 58.3% of Indonesians like to read news on social media. In 2018, the total number of Facebook users in Indonesia was about 64.6 million[8], not large compared with Indonesia's huge population. This is mainly because Indonesia uses the Internet mainly for chat and emojis, and only half of people's time is spent publishing their own photos and videos. It can be assumed from this that Indonesians are more introverted than their peers in Southeast Asia.

Digital Life "Followers"

Malaysia: Advanced digital daily life scenarios

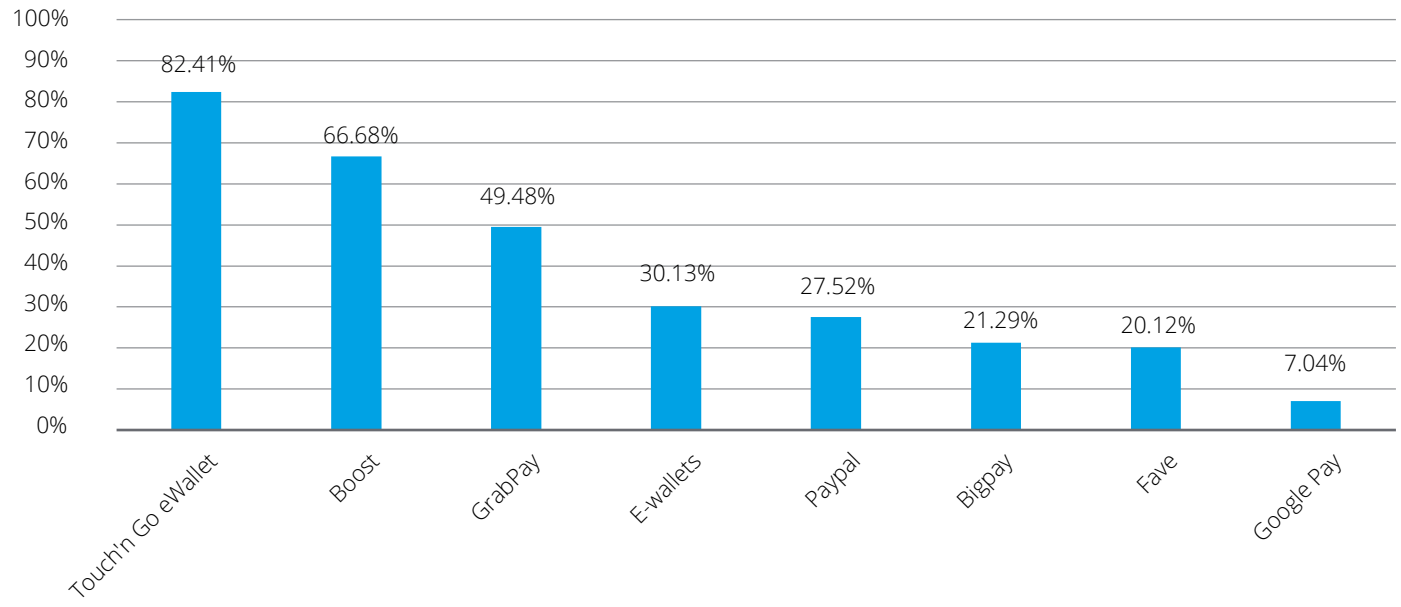
In recent years, Malaysia has built its own unique digital life by making use of the developed infrastructure, particularly transportation, arising from tourism, constantly improving service quality and technology. Today, Malaysia is a qualified "leader" in digital life due to its high aggregate payment amount, active social platforms and convenient lifestyle services.

Starting the digital era with infrastructure

The figure below shows the coverage of various e-wallet applications in Malaysia. The most popular is Touch 'n Go eWallet, Malaysia's digital payment pioneer. Initially a highway toll system company, it now provides more than 20 million TNG cards[9] in the Malaysian market for automatic fare and toll services. Through this high coverage, combined with Malaysia's construction of high-quality infrastructure in recent years, and the continuous extension of metro lines, Touch'n Go's card has a huge user base. TNG's APP recently added an e-wallet function to support various other scenarios, including utility bill payment and shopping on Taobao.

Boost is an up-and-comer in Malaysia. Its salespeople have attracted merchants to cooperate with one other, which is its main operating model, and achieved decent results. More than 5,000 online and physical merchants now cooperate on Boost[10].

Table 38: E-wallet coverage in Malaysia

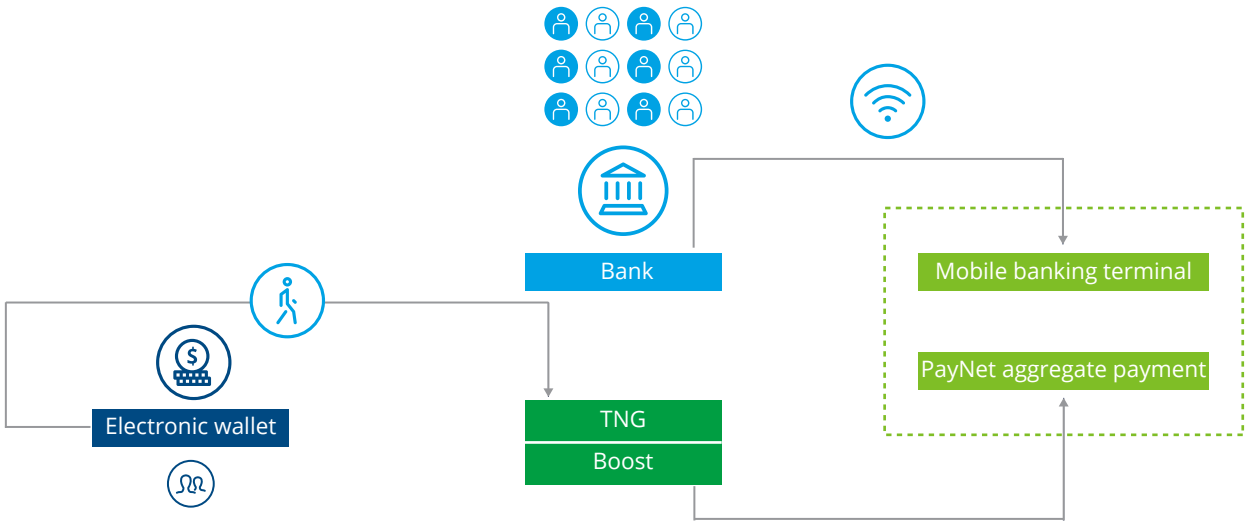


Source: Statista

PayNet, an aggregate payment provider in Malaysia, currently has connections with 44 banks, enabling free transfer between them. PayNet's DuitNow service can bind ID cards and mobile phone numbers with bank card payments, and recently implemented a unified QR code. Since then, TNG and Boost have joined the service and support code payment, officially opening Malaysia's QR code payment era.

[8]Statista, Global Consumer Survey 2020, May 2020
[9]Momentum Works, *Interpretation of the Electronic Wallet of Ant Financial in Malaysia*, 17 September 2019
[10]Misterleaf, *Comparison of Mobile Phones and Electronic Wallets: TNG, Boost, WeChat Pay, AirAsia Big Pay, Razer*, 23 January 2020

Figure 39: The electronic payment system in Malaysia



Source: Deloitte analysis

QR code transport payment realized; digital finance ready to go

After TNG joined the DuitNow system, Malaysia officially became the second country to support subway payment and entrance via QR code.

At the end of 2019, the National Bank of Malaysia announced a draft framework for digital bank licensing and solicited opinions. It will issue up to five digital banking licenses, with clear requirements on the risk resistance capacity, capital adequacy and data security of participating banks. Many institutions participated in the competition. Digital banks and digital finance will help Malaysia's capital market improve further. Although Malaysia's digital life is in its infancy, with cash payment comon in addition to other payment methods for transportation, it is clear that Malaysia's exploration of digital life will not be limited to convenient transportation.

Infrastructure and credit becoming major hindrances

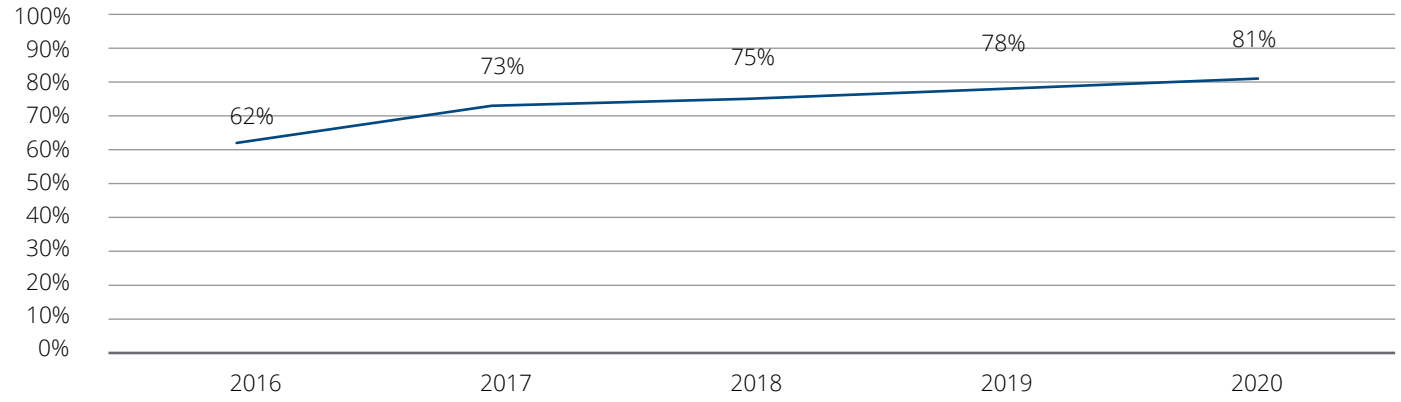
The contribution of e-commerce to Malaysia's gross domestic product (GDP) has grown steadily, reaching about USD28 billion in 2018.

About 80% of Malaysia's population are active Internet users, and mobile phone use is also high. With a population of about 30 million, Malaysia is an attractive market for e-commerce in Southeast Asia due to its rapid economic growth and advanced digital technology infrastructure. However, the market still faces challenges. Traffic congestion is one of the biggest challenges to transporting e-commerce products across the country. Malaysia's e-commerce platforms have also been dealing with online payment fraud. Some 20% of online shoppers pay by credit card, which could restrain the e-commerce market's potential. Some online merchants offer COD options to prevent credit card or online payment fraud[11]. E-commerce providers also offer marketing services, from providing free samples to arranging product bookings, so customers can try products before they buy.

[11]J. Muller, Top 10 e-commerce sites in Malaysia Q1 2020, 15 May 2020

Malaysians are keen users of the Internet and social media

Figure 40: Proportion of active users of social media in Malaysia



Source: Statista

As of January 2020, about 81% of the Malaysian population are active social media users, up by about a third from 60% in 2016, which was already quite high. Facebook is the most popular social media platform among Malaysian users as of 2020, followed by Instagram, Facebook Messenger and LinkedIn.

Since its launch in 2004, Facebook has become the most widely used social media platform in Malaysia. Facebook's penetration in Malaysia is expected to reach 70%-71% in the next few years. In addition, given the growing interest of social media users in Facebook, it is estimated that there will be about 24 million Facebook users in Malaysia by 2023. No matter which platform they use, most Malaysians believe social media can help them feel happy and find it challenging to stop using social media[12]. However, the growth rate of active users has slowed since reaching 70%, possibly due to the limitations of existing concepts and insufficient incentives.

Digital Life "Followers"

Thailand: Street-based digital economy

Thailand has some of the best digital economy development prospects in Southeast Asia. Its relatively high per capita income has led to high mobile phone penetration, bringing digital life to the vast majority of citizens. Whether it's social media, e-commerce, offline payment or game recharging, Thai people have a high degree of acceptance and enthusiasm for the digital economy. Their high trust and dependence on social media have given birth to a unique "social media + e-commerce" shopping model.

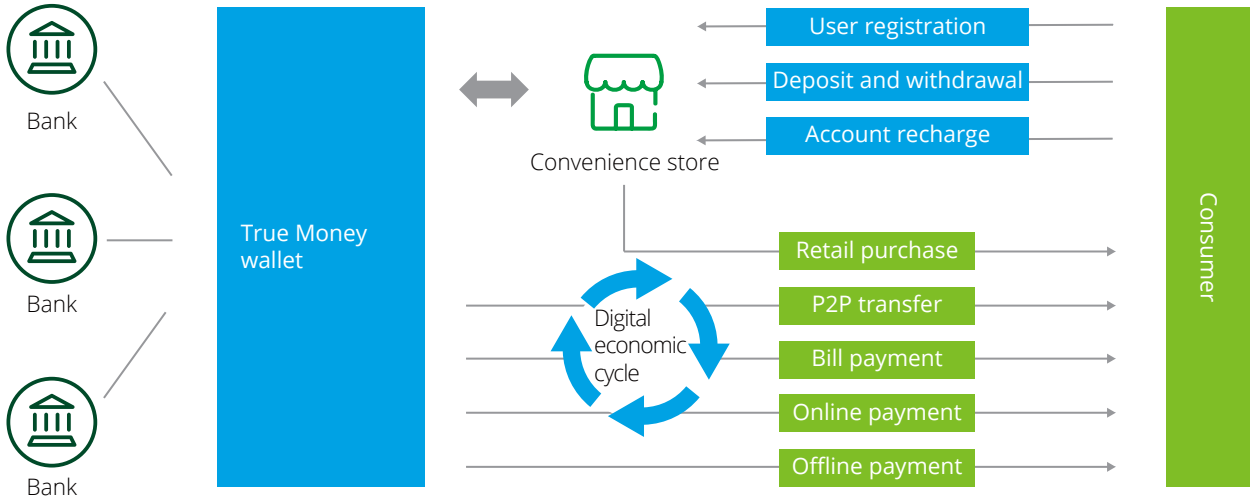
Convenience stores: The nerve endings of the digital economy

In Thailand, 7-11 is an absolute giant in the retail industry, with nearly 10,000 offline retail stores, accounting for about 95% of the sector. These small retail stores, which can be seen everywhere on the streets, are the starting point of Thailand's digital economy.

In Thailand, most young people do not have credit cards, but there is huge demand for online payment for e-commerce and game recharging. TrueMoney, one of Thailand's largest payment service providers, cooperates with convenience stores. Users can recharge their TrueMoney wallets directly by purchasing recharge cards and prepaid cards at convenience stores. Retail stores such as 7-11, which are widely distributed and accessible, have become the "nerve endings" of digital payment and the entire digital economy. After recharging a digital wallet in a convenience store, online game recharging, online shopping and money transfer can be carried out, creating a digital access point for everyone that permeates every corner of their lives. Locals and tourists can also use TrueMoney to purchase goods via digital payments in convenience stores, making convenience stores also an "output point" for digital life.

[12]J. Müller, Social media users as a percentage of the total population of Malaysia, 2020, 13 July 2020
[13]Observation Group of Digital Finance Research Center, Beijing University, *Observation Report on the Financial Technology of Four Asian Countries*, February 2019

Figure 41: Convenience store-centered digital payment in Thailand



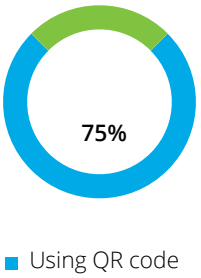
Source: Deloitte analysis

National Overall Plan for Electronic Payment

In 2016, the Thai government and Bank of Thailand (BOT) launched the national overall plan for electronic payment. This plan has become a part of Thailand's 4.0 ambitions and is also the underlying policy support for Thailand to promote digital and cashless payment. The plan is coordinated by Thailand's Ministry of Finance, BOT, the Ministry of Labor, and the General Administration of Audit. It includes five projects: PromptPay, Card-Expansion, e-Tax, Government e-Payment and Literacy and Promotion. Since its establishment, the functions of government expenditure, personal transfer and enterprise payment have gradually become more accessible and improved. As of 2020, the number of registered users of PromptPay exceeds 50 million, and total daily transaction volume is more than USD2.5 billion[14].

At the end of 2017, Thailand released and started promoting the Thai Standard QR code, based on EMV's international standards. This set off a "QR code revolution". For businesses, QR codes spare them the need to purchase expensive payment equipment, and can also handle payment from international tourists. For consumers, QR codes facilitate consumption and payment. Platforms like mPay, BluePay and TrueMoney Wallet have launched online and offline QR code payment in gas stations, convenience stores, restaurants and other scenarios. QR code payment has become one of the most popular payment methods in Thailand, habitually used by 75% of customers, according to UnionPay and Nielsen[15].

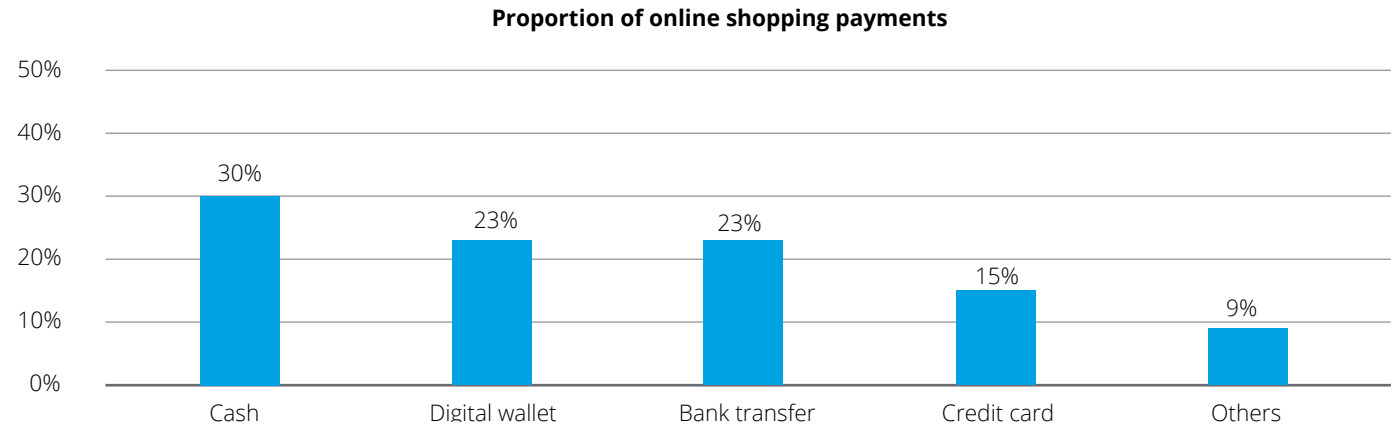
Chart 42: 75% of Thai people pay by QR code



Source: UnionPay International & Nielsen

[14]Blue Boat Global, Thai electronic payment system PromptPay started its accelerated development under the pandemic, 16 June 2020
[15]CAMIA, UnionPay International & Nilsen: 75% of Thai consumers make habitual use of QR code for payment, 5 December 2018

Figure 43: E-commerce payment in Thailand



Source: JP Morgan

Shopping on social media

Like in other Southeast Asia countries, social media is one of Thailand's most popular online activities. In Thailand, it is not just the younger generation who are fans of social media. The middle-aged and the elderly also welcome it, with more than 75% of 51-69 year olds using Facebook[16].

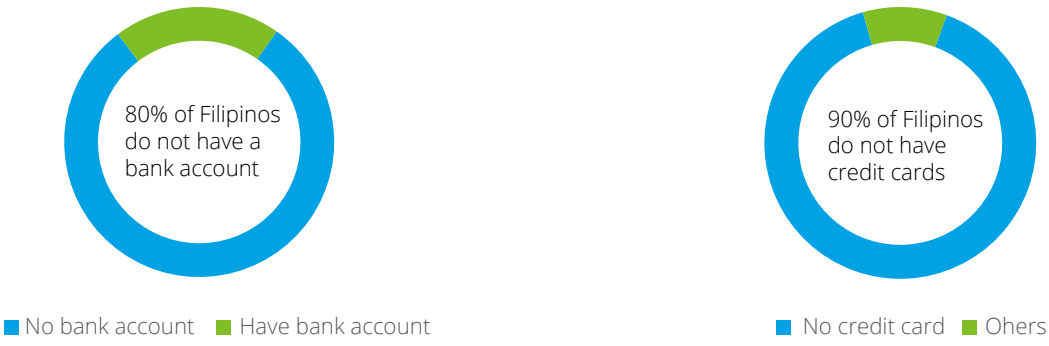
The popularity of social media has laid the foundations for social media e-commerce. Thai users believe in social media advertising more so than their peers in Southeast Asia, with about 60% saying advertising on social media is trustworthy[17]. Usually, businesses will publish product introductions and pictures on social media platforms such as Facebook, and consumers can browse and ask about related products via these platforms, communicate with sellers and pay. In Thailand, 51% of online shoppers shop through social media[18], and 92% of e-commerce consumers use social media to view and compare products before purchasing[19].

Digital Life "Followers"

Philippines: Tech-driven digital age

The Philippines has a population of about 110 (it was 106.7 million in 2018 according to the World Bank and other sources) million, and its capital Manila is the most densely populated city in Asia. The Philippines is also one of the youngest countries, with 62.3% of the population of working age (16-65 years old), and a median age of only 23. At the same time, the coverage of traditional finance in the Philippines is considerably underdeveloped. More than 70% of Philippine adults have no bank account and the penetration rate of credit cards is less than 5%.

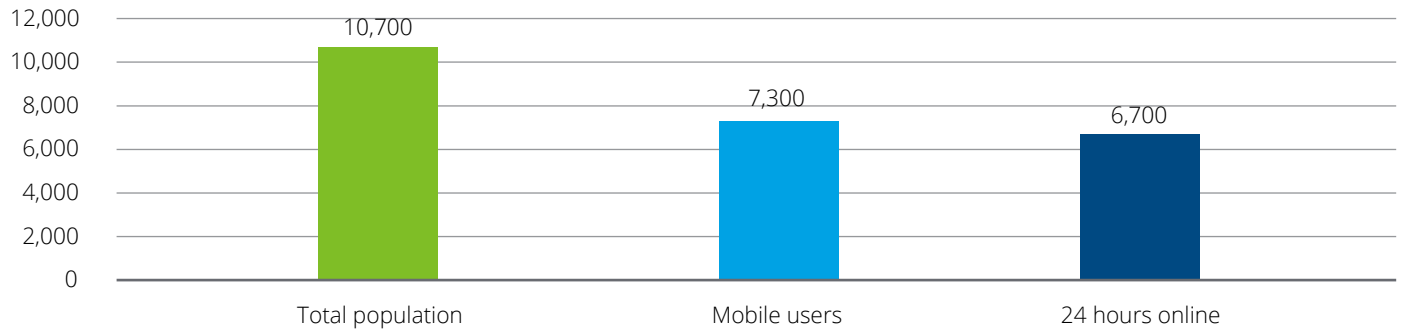
Figure 44: Low coverage of traditional finance in the Philippines



Source: Overseas local payment

[16]eMarketer, *Report on Digital Use in Thailand,* 21 March 2016
[17]Overseas Marketing, *Global E-commerce Information—Thailand: Facebook top picks for social marketing; clothes and personal care are bestselling products*, 15 November 2017
[18]PwC, Hugo.com, 51% of Thai consumers love social media and shopping and use cash settlement as the major mode of payment, 11 October 2016
[19]Zhao Xizi, *Use of Social Websites in Thailand*, Mobiwhale, 13 September 2017

Figure 45: Mobile users in the Philippines



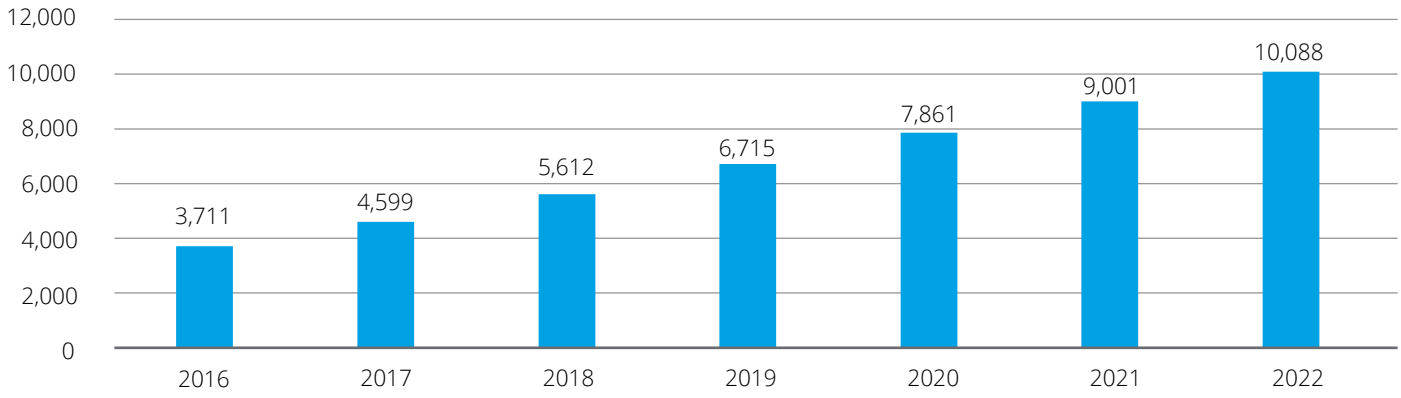
Source: Overseas local payment

In this context, digital payments in the Philippines are gradually changing businesses and consumers. In 2015, the Central Bank of the Philippines launched the National Retail Payment System (NRPS) program, which aims to increase retail e-payment transaction volume to 20% by 2020 through a national electronic payment platform. In 2017, PESONet, the first automatic clearing house in the Philippines, was put into operation, providing great convenience for money transfers among individuals, enterprises and government entities.

The mainstream digital wallets in the Philippines include GCash, GrabPay and PayMaya. Before the COVID-19 outbreak, the popularity of digital payment in the Philippines was limited, and cash payment was still the main payment method.

During the pandemic, digital transaction volume surged due to fear of infection and government demand for "strengthening community isolation". The Central Bank of the Philippines said the cumulative number of transactions between InstaPay (the central bank's electronic funds transfer system) and PESONet (the automated clearing house of the national retail payment system) increased by 260% in April over the same month of 2019 to 2.13 million[20]. Retail e-commerce, food delivery and digital goods have become new growth points in digital payment.

Figure 46: Growth of digital payment in the Philippines (USD million)



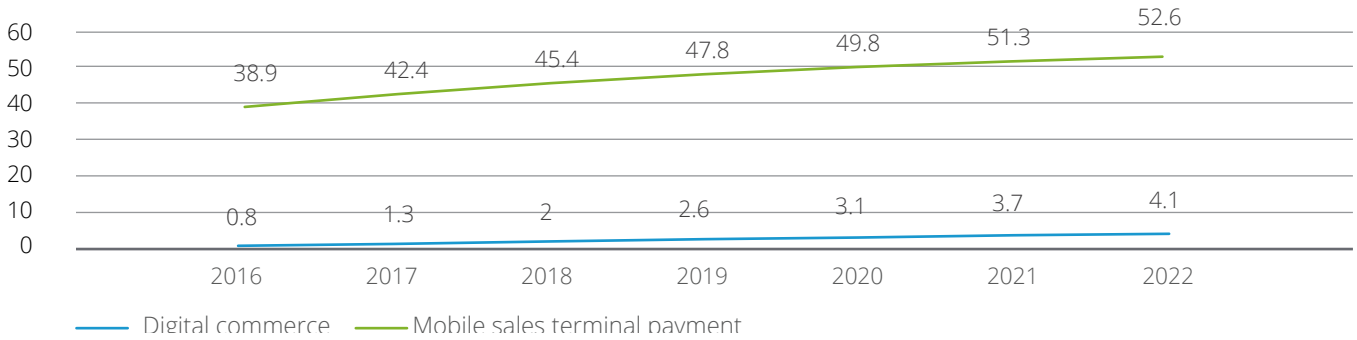
Source: Statista

[20]Li Jiao, *Philippine digital payment embraced a major development opportunity during the pandemic*, Mobile Payment Net, 29 June 2020

E-commerce development has a long way to go

As the second largest digital life "follower", the Philippines' fast-growing e-commerce market is another highlight alongside its highly active social media. With a population of over 100 million and high economic growth brought about by the BPO's four pillar industries, gambling, tourism and labor export, that the Philippine e-commerce market has huge potential. In 2019, the size of the Philippine e-commerce market will reach USD3.8 billion, with annual compound growth of 26.4%[21]. Despite its huge scale and rapid growth, the Philippines' e-commerce market still has some shortcomings to attend to if it wants to become the future growth engine of the digital economy.

Figure 47: Growth in digital commerce (USD100 million) and mobile terminal payment users in the Philippines



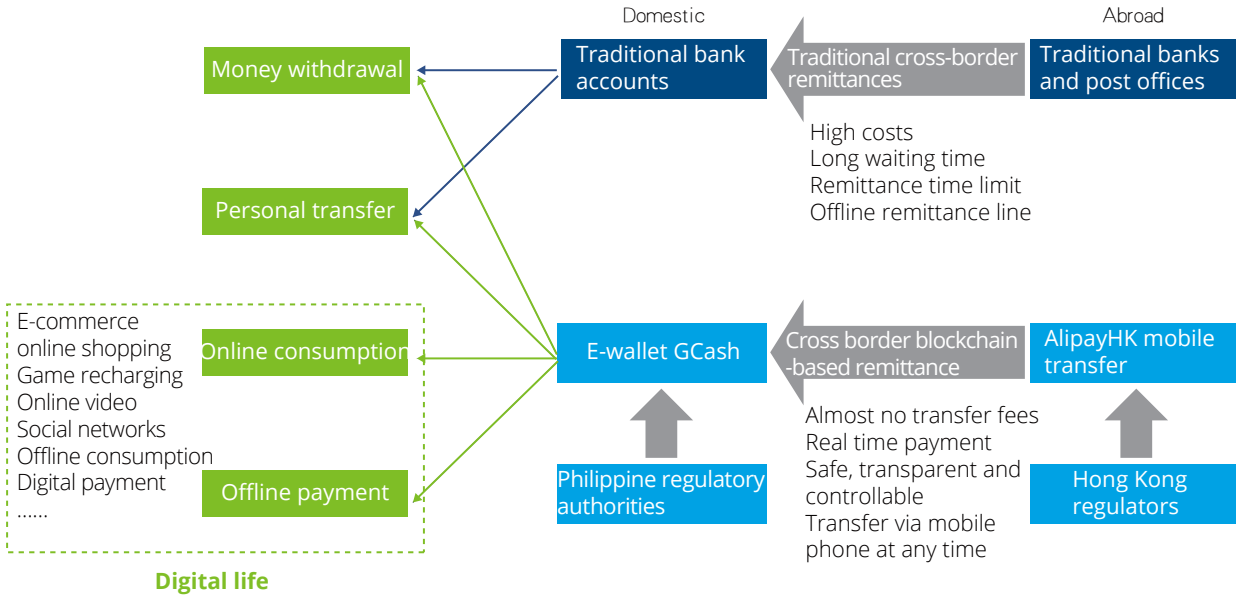
Source: Statista

On one hand, the popularity of e-commerce in the Philippines is quite limited, with 70% of online shopping users between 18-31 years old[22]. These millennials or GenZs are very receptive to the Internet and willing to try new things, so they have become the "pioneers" of online shopping in the Philippines. On the other hand, although there are a large number of Internet users in other cohorts, their penetration rate of e-commerce is still quite low. These potential users, especially people aged 30-50, have much stronger consumption power than young people, and they also have the desire to improve family life. For Philippine e-commerce to develop, the riddle of how to attract and guide these middle-aged groups with stronger consumption capacity to become e-commerce users needs to be solved.

Logistics in the Philippines is an important factor hindering e-commerce consumption. Due to the large number of islands in the Philippines and poor traffic conditions in some areas, local logistics distribution is extremely inconvenient due to high cost and delays. Last-mile distribution has become the toughest problem in many cities. In addition, local logistics enterprises are small and dispersed, which makes it difficult to form a large-scale, network-based logistics system that would attain economy of scale advantages. Logistics is a shortcoming in Philippine e-commerce shopping, and needs to be improved.

[21]Shopee Knowledge Bureau, *About the e-commerce market in the Philippines*, Sohu, 29 May 2020
[22]ibid (as source is same as previous footnote)

Figure 48: The benefits of using blockchain in Philippines digital payment



Source: Deloitte analysis

Blockchain technology a new channel for digital transfers

The Philippines is one of world's largest labor exporting countries, with nearly 10 million people, or about one out of every 10 Filipinos, working overseas. The remittances they send back home every year amount to about 10% of GDP[23]. Therefore, for many ordinary Filipino workers and families, convenient, fast and cheap cross-border remittance channels are very important. The traditional remittance channels of banks, post offices and remittance companies often have large service charges. At the same time, due to legal, regulatory and exchange rate issues, money takes a long time to reach accounts. Under normal circumstances, each remittance carries a USD6-USD146 service charge[24], takes nearly a week to arrive at the target account, and the remitter must queue up and remit on bank working days, making it very inconvenient.

Blockchain technology has created new channels for cross-border transfers. In 2018, AlipayHK provided the world's first e-wallet cross-border remittance service based on blockchain technology, helping a large number of Filipinos engaged in domestic services in Hong Kong remit money home. Through cooperation with GCash, AlipayHK has successfully realized the real-time receipt and withdrawal of cross-border remittances through day-end fund clearing and foreign exchange via Standard Chartered Bank.

Blockchain realizes real-time synchronization and parallel confirmation of business nodes through a distributed ledger, which improves efficiency. When a remittance is initiated by the wallet, all participants receive information at the same time. After checking, all links on the blockchain complete the remittance transaction simultaneously.

This new remittance method basically has no fees, offers real-time payment, and can be handled on a mobile phone at any time. Moreover, the immutable features of blockchain ensure the safety of remittances, and regulatory agencies in the Philippines and Hong Kong can monitor every link in cross-border remittances in real time, which it more transparent and efficient.

These significant advantages over traditional methods are promoting rapid popularization of blockchain transfers. In addition to GCash, Ripple and Send Friend are developing and providing blockchain transfer transaction services, and blockchain transfer is a rising force in the Philippine's digital payment market.

[23]Globalfang, *Know something about the 4 industrial pillars in the economic development of Philippines*, Sohu, 26 August 2019
[24]Observation Group of Digital Finance Research Center, Beijing University, *Observation Report on the Financial Technology of Four Asian Countries*, February, 2019

Table: Comparison of cross-border remittance methods

Method	Fees	Time	Access	Experience
Traditional cross-border remittance	USD6-USD146 per transaction	3-7 working days	Bank working days	Offline queuing and on-site remittance
Blockchain remittance	Almost 0 fees	Real-time	24/7	Mobile transfer

Source: Beijing University's *Asia Digital Finance and Investigation Report*

Given overseas remittances are an important source of income for many Filipino households, new digital cross-border transfer channels have promoted the popularity of digital wallets and the expansion of online consumption. To be able to use digital cross-border transfer, a growing number of Filipinos and their families have digital wallets, and have started to try digital wallets for online consumption, digital payment and other lifestyle services.

Digital Life "Prospects"

India: Digital life from a small perspective

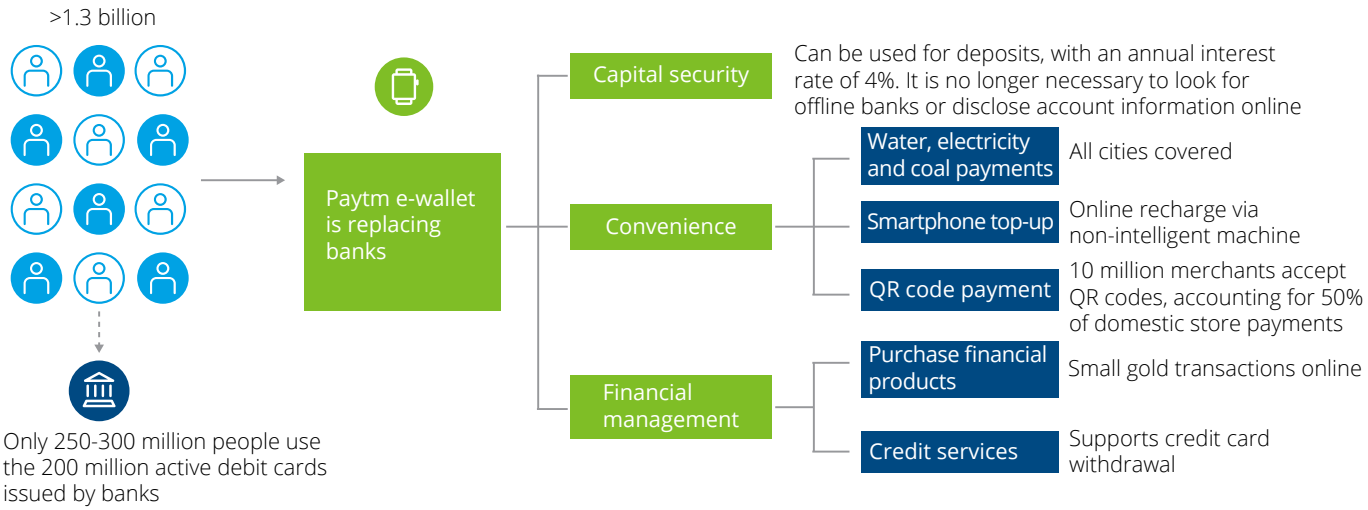
India, the world's second largest country by population, has been increasingly recognized by the international community in recent years. Indian elites can be seen in many top positions and institutions. India's huge population has made it possible for many successful digital applications to achieve optimal growth. It is a market with great prospects, and India's digital development will forge ahead as the country's economy grows.

E-wallet and bank terminals: from competition to unification

India, with its plentiful scientific and technological talent, has been at the forefront of digital society creation in South Asia. After the Modi government implemented the removal of large banknotes from circulation, banking and digital banking rose rapidly.

Paytm has brought great convenience to all kinds of lifestyle services, and received widespread attention and extensive use since its launch. At present, Paytm is the third largest e-money provider in the world, with 450 million real name users[25]. UPI is an aggregate payment service created by major banks. It initially connected most of the banks in India, and in recent years, has also begun to access third-party payment platforms such as Paytm and Google Pay to support real-time, inter-bank payment, attracting 100 million users[26]. People no longer need to take out their bank or credit cards, and this unified payment method is convenient for consumers. The Indian government has been approved to require the deployment of UPI in all stores, and will provide support mechanisms for national payment processing companies to deploy it across India as soon as possible.

Figure 49: Paytm can replace traditional banks



Source: Deloitte analysis

[25]36Krypton, "*Third Largest Unicorn Club of the World—India*", 28 February 2020
[26]Mobile Payment Net, Indian Platforms, e.g. Paytm, will add UPI automatic online payment function, 27 July 2020

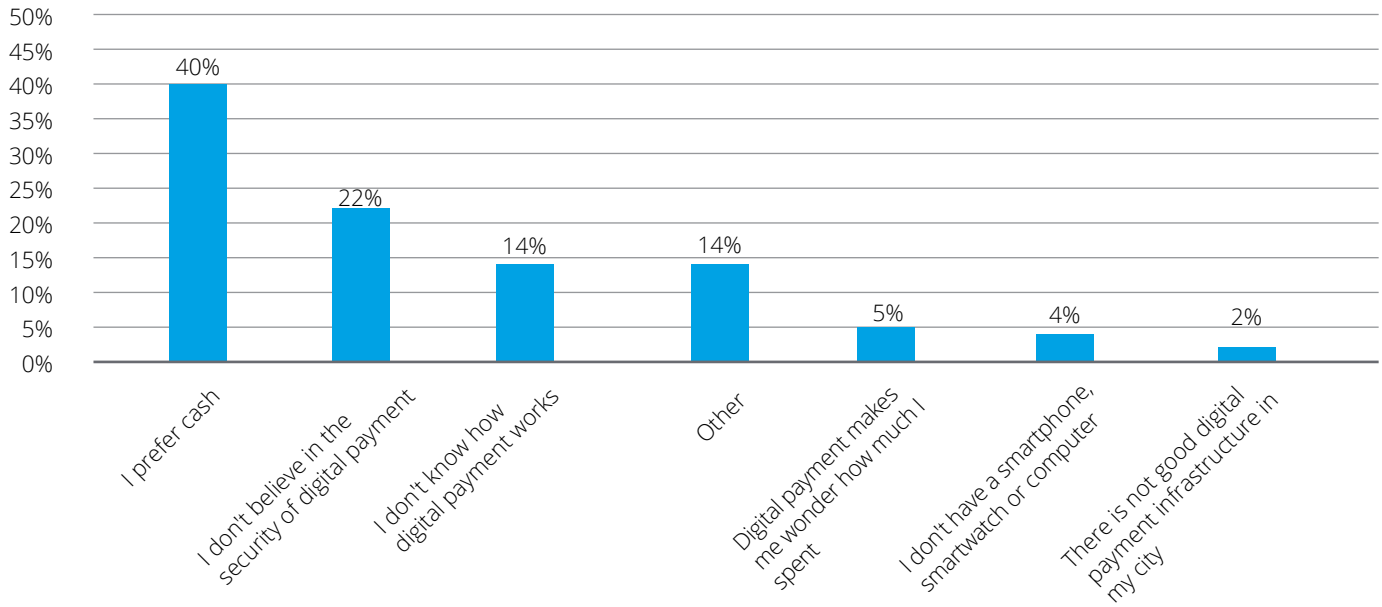
In 2016, Paytm began to support utility bill payment in every Indian city. However, mobile banking and some overseas applications, such as Google Pay, have followed its model, opening their functions to payment for daily essentials. Some mobile banking applications also support online reservation of natural gas, including provision of payment receipts. Many mobile terminal providers are entering competition with Paytm, and the digital life payment market is becoming increasingly diversified.

Multiple e-commerce platforms; cash-on-delivery is the mainstream

According to statistics, in 2017/18, India had 460 million Internet users and 330 million e-commerce users. The penetration rate of e-commerce users was 65%, and per capita online shopping volume was USD61.47, accounting for 3% of the total retail sales[27].

India's e-commerce platforms are still in a growth stage, and most of them are loss-making. With its low proportion of e-commerce in total sales, India's market is small, but has extensive prospects. Almost all e-commerce platforms support credit card and online banking payments, but support for e-wallets is relatively limited. However, cash on delivery (COD) is still the most popular form of payment, because most e-commerce websites do not support direct returns to bank accounts. Instead, they will transfer refunds to e-commerce website accounts for subsequent online shopping payment. The advantage of COD is that it enables payment after acceptance, which makes Indian buyers feel more at ease.

Table 50: Why Indian consumers do not use digital payment

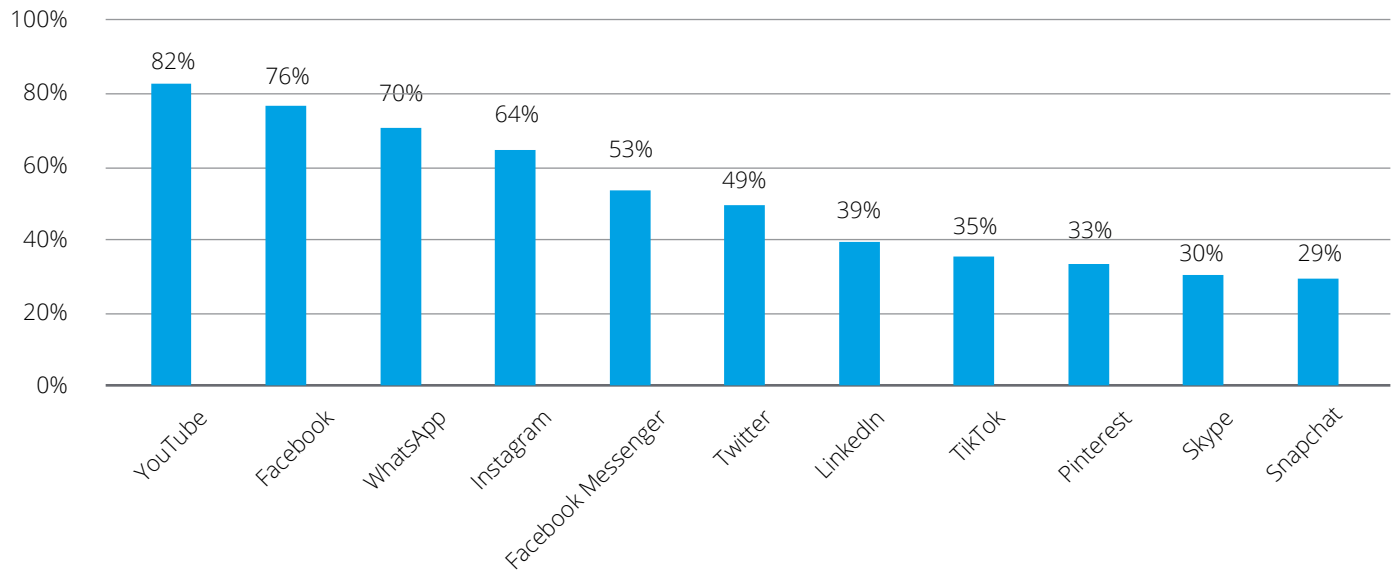


Source: Rakuten survey

[27]APUS, *Report on Indian Internet Finance*, April 2018

Social software internationalization; short video applications highly popular

Table 51: Penetration rate of social sharing platforms in India



Source: Statista

WhatsApp and Facebook are the most popular social media APPs in India, with 250 million Facebook users. This is similar to most countries. Because these APPs are also common in Europe and the US, they are convenient communication channels for many Indian students' families. Among media APPs, YouTube and Netflix are also supported in India.

TikTok, a Chinese application, has become very popular among Indians, with 611 million downloads, accounting for 30% of total downloads in India[28]. It supports a variety of Indian languages and is very popular in villages and towns. It has created many Internet celebrities and many people have been paid for their video clicks through this application. TikTok has local competitors, including short video sharing platforms Chingari and Mitron. More similar products could appear in India, providing a platform for Indians who love life and sharing.

Digital Life "Challengers"

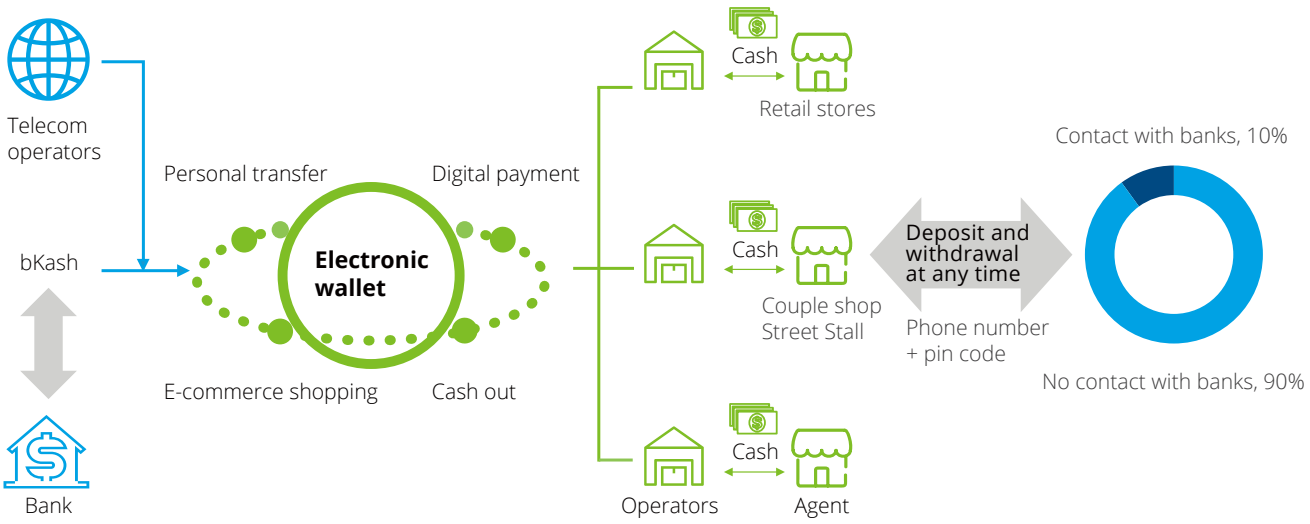
Bangladesh: Inclusive digital finance for low income people

Bangladesh is a mainly agricultural country with a low economic base. Bangladesh's per capita GDP in 2019 was USD1,930, ranking 165th in the world. There is a large gap in conventional financial services in Bangladesh. Many people do not have credit cards, bank accounts or other traditional financial instruments, and are unable to access financial services such as transfer, remittance and payment. It costs USD0.12 to open a bank account[29], which many poor people cannot afford.

Traditional financial services are particularly scarce in rural areas. Young people who work in cities can only send their wages home by asking drivers to take the money. In such a situation, there is strong financial inclusion impetus in Bangladesh's digital finance development. By virtue of its inclusive mobile financial services, bKash, a local payment enterprise in Bangladesh, has almost subverted the country's whole financial structure.

[28]Sensor Tower Store Intelligence, *Downloads of TikTok in Overseas Markets*, May 2020
[29]Observation Group of Digital Finance Research Center, Beijing University, *Observation Report on the Financial Technology of Four Asian Countries*, February 2019

Figure 52: The business model of Bangladesh's bKash



Source: Deloitte analysis

The route to expansion: agent distribution network

bKash's expansion is reliant on a large network of tens of thousands of agents and hundreds of distributors in every corner of Bangladesh's urban and rural areas. Most of these networks cooperate with traditional commercial distribution companies, and develop agents by using distributors' original networks selling consumer goods, mobile phone top-up and household products. These agents are usually retail stores, grocery shops or small family run establishment. They are responsible for attracting customers, helping them register, and making deposits and withdrawals from customers' electronic accounts. The agent will collect the cash deposited by customers or provide small cash withdrawals for them, and deliver the collected cash to distributors, who will deposit it in a bank. Because agents and distributors all get a certain percentage of commission on the customer's transaction volume, consumers, agents, distributors and bKash itself all gain profits or benefits. bKash has created a virtuous digital financial cycle.

Mobile finance: E-wallet for users anytime, anywhere

As low-income groups in Bangladesh often cannot afford smartphones, bKash has designed a universal interface to run on a USD15 handset widely used in Bangladesh. Customers can access their e-wallet to conduct financial transactions such as transfer and payment by simply dialing a number on their mobile phone and inputting a pin code. Customers can also go directly to an agent, including acquaintances such as grocery store owners, to withdraw cash from their e-wallets. In addition to a simple user interface and quick use, bKash has established partnerships with multiple mobile network operators to serve more low-income people and realize inclusive finance, reducing its handling fee to 1.85% of the transfer amount[30]. Through this series of measures, bKash has become a digital financial service provider with 80% market share and 48 million users, with 90% of new users never having accessed traditional banking services. In this way, it has shown that technological progress and digital life not only create dividends for middle- and high-income countries and groups, but also enable low-income groups to start connecting with and enjoying digital life.

"310" access to small and micro digital loans

Due to a lack of traditional financial services, low-income groups, small and micro businesses, students and other groups in Bangladesh struggle to obtain loans from traditional financial channels. The lack of traditional

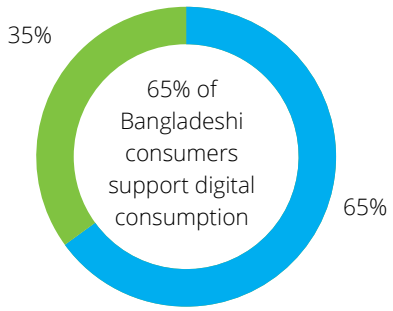
[30] *Observation Report on the Financial Technology of Four Asian Countries*

finance also hinders the development of Bangladesh, especially small and micro enterprises, creating space for the expansion of digital lending.

In cooperation with City Bank of Bangladesh, bKash has launched small and micro digital loan services. Through bKash, users can immediately obtain short-term loans of up to USD117. City Bank of Bangladesh closely monitors the repayment behavior of users to determine whether they are eligible for loans in the future. Eligible users can enter an amount within the loan limit approved by the bank using the bKash application. After accepting the loan conditions and sharing information, they can immediately receive the loan in their bKash account. bKash relies on loan and credit risk management technology to support its credit evaluation of potential borrowers, achieving "310" lending: the whole process only needs three minutes for applications, one second for payments, and zero manual intervention. The pilot loan term is three months, and users can repay the interest in installments or via prepayment through their bKash wallets.

Through cooperation with a traditional financial institution, bKash obtained a source of loan funds and permission to operate a loan business, because it is supervised by the central bank via traditional banks. The banks, meanwhile, gained access to more diverse loan channels, enabling access to customer groups that could not be contacted in traditional ways. Low-income groups and small and micro enterprises in Bangladesh can get short-term loans more quickly, and short-term capital demand, consumption demand and capital turnover of enterprises in Bangladesh can receive timely support from digital loans. The digital wallet has made a great contribution to personal development and economic growth.

Figure 53: Support for digital consumption in Bangladesh



Source: Visa & YouGov

Huge potential user market

Bangladesh is in a digital life "chasing" position, mainly due to less developed infrastructure and low per capita income. The Internet penetration rate of Bangladesh is about 60%, and there is a huge potential Internet user market. In 2018, the Bangladesh Communications Management Committee issued 4G licenses to Grameenphone, Banghalink, Robi and Teletalk, bringing Bangladesh into the 4G era. About 50% of users access the network through 3G or 4G, and some 20% are active on social media[31].

Bangladesh still has a large potential user market space. With the improvement of Internet infrastructure, further reduction of smartphone prices and rise of per capita income, a large number of new Internet users will emerge in Bangladesh to become a new growth point in its digital economy.

[31] *Observation Report on the Financial Technology of Four Asian Countries*

Table: Major e-commerce websites in Bangladesh

Website	Main products	Features
PriyoShop.com	Accessories, electronics, home appliances, books, fashion, health, beauty	
Rokomari.com	Online books	Low prices
ClickBD	Electronics, cars, clothing, digital cameras and other products	One of the largest e-commerce platforms for electronic products
BDHAAT	All	The largest online shopping site; serves customers through chat, email, smartphones and analog phones
Bagdoom.com	Fashion, watches, electronics, t-shirts, perfume, saris, tops, contact lenses, sheets, jewelry, household appliances, gadgets and other commodities	Free delivery; large discounts
Kiksha	Fashion, mobile phones, jewelry, home appliances, flowers, gifts and life products	The only lifestyle e-commerce website
iferi.com	Men's fashion, women's fashion, groceries and baby products	

Source: Looking Outside

Digital Life "Challengers"

Pakistan: Every area of digital life needs to developed

Pakistan has relatively slow social and economic development. Pakistan only introduced 3G networks in 2013, whereas India and Sri Lanka adopted 3G networks as early as 2006. Slow advances in infrastructure and socio-economic development have seriously hindered the progress of Pakistan's digital economy. In 2018, total e-commerce sales volume in Pakistan was only USD256 million, far lower than in other countries (equivalent to 5% of Egypt's and about 1.4% of Iran's[32]). E-commerce is a long way from infiltrating daily life. Many Pakistanis are skeptical about looking at photos to buy goods. Traditional consumption still dominates their lives, and digital consumption habits need to be cultivated.

Supporting Pakistan's digital foundations

Taking into account the above context, Pakistan's collaborations with Chinese companies, as well as the introduction of products and digital business models from China has helped the country to catch up.

For example, at the national level, economic and infrastructure-related initiatives have provided valuable opportunities for Pakistan to bridge its digital divide. The construction of digital infrastructure has become an opportunity for Pakistan to get rid of its "laggard" status. The 4G network provided by China Mobile's Pakistan company has expanded to more than 300 cities in the country, with more than 30 million users, of which 10 million use 4G, accounting for half the 4G market[33]. The network has become an important part of digital life in Pakistan.

In addition, introduction of lower-priced but highly advanced smartphones is changing Pakistan's digital environment. Because it is a low income country, the price of popular smart phones in Pakistan is typically below USD100. With China's Huawei, Oppo, Vivo and other brand smartphones entering the Pakistan market, the smartphone penetration rate is rising rapidly, which should guarantee the user base for development of the digital economy. There are now about three million new smartphone users in Pakistan every month, with students and young people the main growth segment[34].

Using China's e-commerce experience

Based on the rapid development of its digital environment, Pakistan has developed new e-commerce and payment models. As Pakistan's retail industry is dominated by small

grocery stores, cultivating the digital e-commerce habits at their retail terminals has become the central aspect of e-commerce development. Shoplus provides online purchasing and logistics services for these small retail stores and family-run shops, aiming to change the shopping habits of consumers in Pakistan by cultivating digital acceptance among these small shop owners. The emergence of these new models and patterns are inseparable from the participation of Chinese enterprises. In 2018, Alibaba acquired Daraz, Pakistan's most popular e-commerce platform, and Chinese enterprises shared their technologies and models with Pakistan to help develop local e-commerce and payment enterprises. In 2020, Sadapay, a fintech company in Pakistan, was granted an e-money license from the National Bank of Pakistan to launch digital wallet services. With these development trends, digital life can be expected to flourish in Pakistan.

[32]Xianfengchuhai, *Why is the e-commerce market in Pakistan a ‘hard bone’ to bite? Where are the drivers and turning point?* Hugo.com, 12 November 2019
[33]Lu Bin, *Number of 4G customers of China Mobile's Pakistan Company top 10 million*, Chinese Economy Net, January 16, 2019
[34]ePanda, *Interview: He is a Pakistani who is most familiar with Chinese e-commerce and launched the unique B2B2C cross-border model,* Sohu, 17 May 2018

Chapter IV Unleashing the Potential of Digital Life

There is no doubt South and Southeast Asia will see rapid developments in digital life. However, there are still several areas that can be improved, especially digital infrastructure, consumer development, information security, and policy coordination, to realize and release these region's maximum potential

1.Continuous promotion of digital communication infrastructure

Due to the late starts of some countries and their relatively less developed economies and digital infrastructure construction, there is still room to improve Internet and mobile coverage. The gap is mainly in rural and remote areas of South and Southeast Asia. In future, South and Southeast Asia countries will accelerate digital infrastructure construction, with a focus on these potential users.

First, the penetration rate of communication bandwidths above 4G should increase to gradually replace 3G. 3G and 4G development started late in some countries. For example, Bangladesh launched 3G in 2012, its 4G network was only launched in 2018, and its domestic communication network is still dominated by 2G. This hinders the development of some digital life services, such as live broadcasting and e-commerce, which all rely on higher transmission speed. South and Southeast Asia countries need to enhance their construction of infrastructure such as base stations, improve coverage and reduce tariffs.

Second, improve Internet coverage in rural and remote areas. Due to the late development and high cost of base station construction, Internet users in many countries of South Asia and Southeast Asia are concentrated in major cities and surrounding areas. For example, most Internet and digital wallet users in Thailand are concentrated around Bangkok. Internet coverage in rural and remote areas is still poor, and most of Thailand's "Internet strangers" are in rural and remote areas. There is an urgent need to improve the coverage of rural networks to strengthen digital infrastructure. The most important component of Thailand's 4.0 strategy is its national infrastructure plan, which aims to connect the Internet to 70,000 villages by 2020. In 2019, India's rural Internet users will reach 227 million, surpassing those in cities for the first time, with huge development potential. To give people in rural and remote areas access to the Internet, the short-term cost of base station construction is high, but in the long run will give powerful impetus to the digital economy.

2.Encourage and develop consumer and merchant adoption of digital payment

Despite the rapid development of Southeast Asia countries, e-commerce accounts for only 3% of their total retail sales, far below the global average. The six major Southeast Asia economies account for less than 1% of global e-commerce transactions. One of the reasons for the slow development of e-commerce transactions is that consumers still have concerns about online shopping, and traditional consumption habits still dominate their lives. One of the reasons Pakistan citizens have low acceptance of e-commerce is that people are not used to looking at photos to buy things, and do not trust in e-commerce.

Even in countries with high banking penetration, such as Singapore, 15%-20% of payments are made in cash. Cash has long been the main payment method in India. Despite the rapid growth of digital payment, there is still widespread consumer concern about security, privacy and transparency.

Therefore, consumer awareness remains an obstacle to the large-scale adoption of digital financial transactions. Fintech companies are technologically ready, but one of their biggest challenges is encouraging people to transit from cash payments to cashless wallets, and getting

potential users to understand the benefits digital transactions can bring. Fintech companies and the e-commerce industry need to establish public trust in online shopping and digital consumption through continuous marketing activities, and cultivate people's habit of using digital payment.

Offline digital payment is a key part of the digital economy, and its popularity largely depends on the acceptance of digital payment by merchants. Traditional payment methods such as cards require merchants to install expensive terminal equipment and carry hefty service charges. But QR code payment has changed this dynamic. Businesses can simply collect money through QR codes and smartphones without installing equipment. The promotion of digital payment among businesses needs to rely on lower or zero service charges, the integration of national identity application program interfaces, merchant system and other elements. Industry participants need to invest a great deal of energy to overcome this obstacle, not only through marketing activities, but also through continuous product improvement.

3.Grasp opportunities to serve those with inadequate access to financial services

With continued investment in financial technology across South and Southeast Asia, the region is striving to bridge the gap between mobile connectivity and financial inclusion. Mobile connectivity in the region is at 133% (meaning some users have more than one SIM card or mobile phone), yet only 27% of people in Southeast Asia have bank accounts.

Of the nearly 400 million adults in Southeast Asia, only 104 million enjoy adequate financial services. Another 98 million people have bank accounts but not enough money in them, with insufficient channels for credit, investment and insurance. About 198 million adults still have no bank deposits or no bank account. This is an obstacle to loans and savings, but banking applications and other fintech products can provide solutions for individuals and small businesses that meet their goals.

Both region's futures will be increasingly "cashless", as China is now. Those who do not receive adequate financial services are likely to become the real growth engine of digital financial services companies. Consumer technology platforms, due to their huge user bases, can meet the needs of this market segment. In the next few years, it will be the main battleground as players compete to win consumers' trust.

4.Building an information security mechanism "trinity"

Information security has become one of the most serious problems in the digital economy. In India, digital payment fraud accounts for about half of bank fraud. In 2019, more than 40 security bugs were identified in the government audit of India's flagship payment processor. Some 32% of Thai technical professionals have personally experienced payment fraud related to e-commerce in the past year. In 2016, the website of the Philippine's Commission on Elections was hacked and a large amount of voter information was leaked. A series of security incidents have cast a shadow over development of the digital economy.

The limited trust of the public in the security of payment could hinder the development of digital payment and e-wallets. Although the ultimate goal of digitization is to create a digital economy, hasty promotion of digitization can pose significant challenges to existing security and fraud controls. To find any vulnerabilities in systems they can exploit, cybercriminals often attack individuals rather than the system itself, collecting sensitive details.

There are three main considerations in information security. The first is the "digital trap", in which many first-time users are not "digital natives", making it important to ensure they comply with necessary security protocols.

Second, banks and fintech companies must solve information security issues. Enterprises can deploy high-end machine learning based on AI to identify and reduce fraud, and solve the problem of fraudsters entering from a given channel for a specific time or to an individual account. In fraud detection, it is more important to determine the source of fraud rather than the transaction itself. For example, all payment channels (digital, mobile, card, ATM and UPI) must be connected. Today, fraud detection in these channels is still highly fragmented across many financial institutions.

Third, information security has become a necessary component of the digital economy development policies of almost every country. Thailand has launched a strict Cyber Security Act. India introduced a personal data protection act in 2019 and its Cyber Security Strategy 2020, and the Reserve Bank of India (RBI) has

issued guidelines on security and risk mitigation for digital payment, taking measures to make credit card transactions, online banking, electronic payments, ATM transactions and prepaid payment instruments (PPI) more secure. The RBI has also issued guidelines to limit the liability of customers for unauthorized e-banking transactions.

Countries are also introducing biometric measures to reduce fraud in digital payment processing. Those that establish the legal, institutional, technical and other mechanisms to protect information security and reduce payment fraud, will provide solid security backing for development of the digital economy. Although network security and digital payment fraud cases are a substantial risk, the digital payment ecosystem can be strengthened, and organizations, users and governments should share responsibility for ensuring its security.

5.Collaboration and communication to reduce business risks

A common requirement among participants in digital financial services is that policies should be consistent and predictable. Regulatory uncertainty is the biggest drag on investment and risks entire business models suddenly becoming infeasible. A fragmented regulatory landscape, including substantial differences in licensing procedures, is a major challenge facing regional players operating across multiple markets. If coordination is not strengthened, variations in local regulatory requirements can lead to higher costs and delays in enterprises' regional expansion plans.

Governments of South and Southeast Asian countries should coordinate the financial services sectors across their regions, which will promote the development of regional business models and help direct resources towards world-class technology and talent. For example, digital identification data, including digital IDs, and e-Know Your Customer (e-KYC) processes can significantly increase opportunities in digital financial services, including opportunities to serve the unbanked. Promoting common standards for payment and remittance will be key to promoting interoperability between different solutions. In turn, these policies will push South and Southeast Asia into a competitive environment that is less differentiated from markets such as China, India and the United States, where companies can scale up rapidly.

There is also fragmented supervision across both regions. Because digital payment involves financial services, for their own financial security, countries have very strict regulatory standards for foreign payment enterprises, such as business licensing, service scope, banking relations and partnerships. To solve these issues, a unified payment platform or standard needs to be established at the national level. For example, Thailand has established a unified electronic payment platform and issued a unified payment QR code. To resolve issues in cross-border transfers, as supervision matures, governments should establish communication and consultation mechanisms, eliminate unnecessary regulatory measures, unify standards as much as possible, and realize joint supervision and collaborative communication.

6.Encourage localized digital innovation

Due to the different social and economic development conditions and customs of different countries, their digital services have strong local features. Unlike overseas Internet enterprises entering domestic markets, localized digital innovation can create digital services in line with national conditions, and are more likely to be favored by local consumers.

South and Southeast Asian countries have great potential for domestic digital innovation. Their populations are young and their education systems are strong. India and Pakistan have world-famous programmers and data engineers. Encouraging local digital innovation can give full play to each country's advantages and provide characteristic digital services.

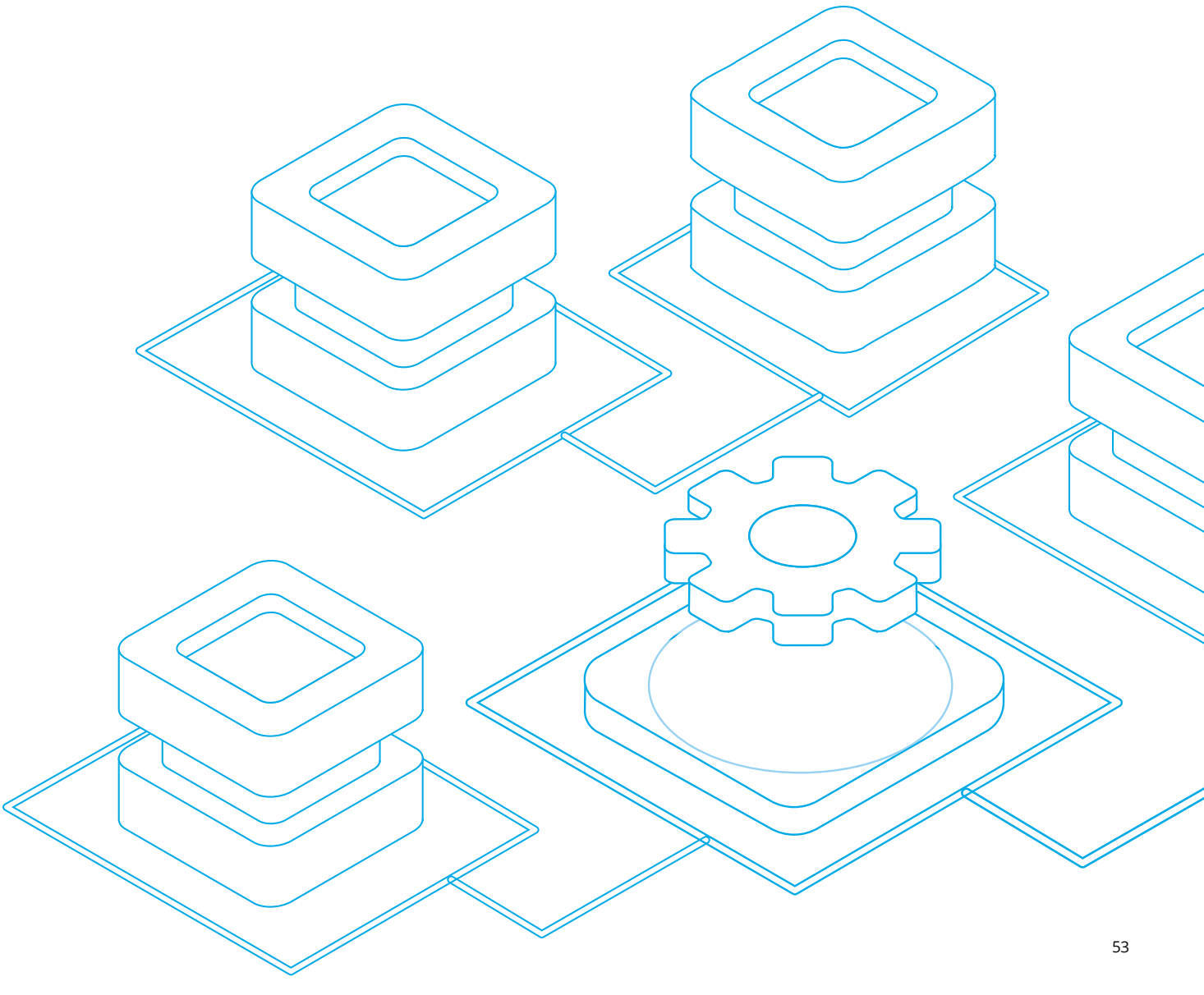
For example, Thailand's 2021 Digital Development Vision promotes digital transformation at a national policy level. With policy support, the Punnowithi innovation park, a key element of Thailand 4.0, will become the largest of its kind in Southeast Asia, providing a platform for innovation and entrepreneurship for digital start-ups and unicorn enterprises. Telecommunication infrastructure and digital platforms at the park enable digital innovation. Start-up enterprises can also contact scientific research organizations and multinational enterprises to obtain financial, technological and policy support. With such support, Thailand's digital start-ups have changed the face of digital life across social networking, finance, shopping and online video.

To further help digital start-ups and establish a uniform playing field for start-ups and major Internet companies, the degree of information infrastructure sharing and openness between South and Southeast Asian countries needs to be enhanced. Small and medium-sized enterprises can share cloud computing, Internet access, bank loan, market information and other resources, helping them access a fair competitive environment and become a new force in the digital economy.

7.Actively cultivate digital talent

With the rapid development of digital technology in South and Southeast Asia, there is a growing talent gap. Demand for Internet and financial talent is huge, particularly in digital payment, and traditional training struggles to provide a sufficiently large amount of such talent. Therefore, developing talent with "Internet thinking" and an ability to adapt to fast-paced work has become key to the long-term, sustainable development of the South and Southeast Asia digital economy.

School-enterprise cooperation and international cooperation are two solutions to this talent issue. Through targeted training and cooperation, talent with solid financial and computer knowledge, and practical experience, can be developed. Through international cooperation, people can access the world's most advanced Internet knowledge and concepts, and learn about the digital economy models of large multinational Internet enterprises, which will help improve local digital economic models across South Asia and Southeast Asia. For example, Alibaba's business school, together with the Thailand Industry Promotion Agency (DIP) and the International Trade Promotion Agency (DITP), recently launched long-term online and offline e-commerce training to cultivate digital economy talent and promote the development of "Thailand 4.0".



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Fax: +86 25 8691 8776

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