

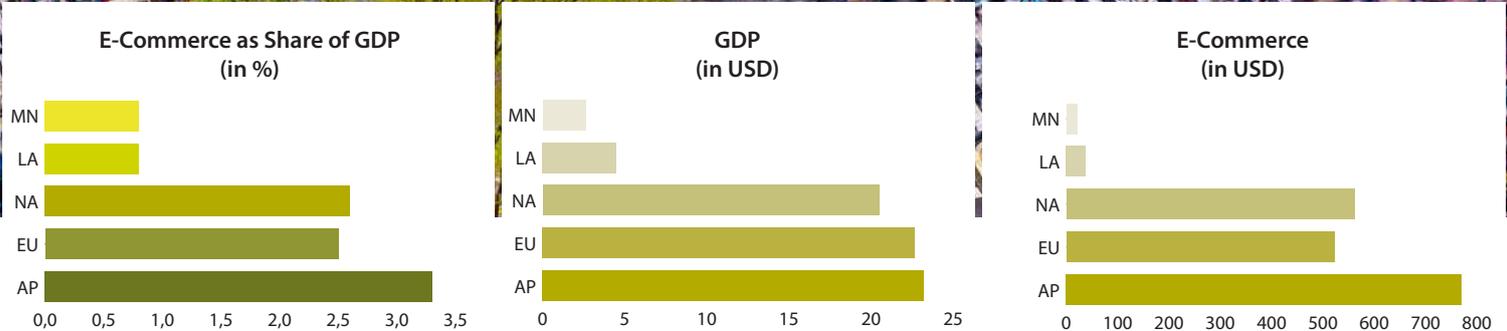


**COMPUTOP'S
PAYMENTS & E-COMMERCE REPORT
ASIA-PACIFIC**



The world's largest and most populous continent, Asia is made up of 48 countries and spans 44,579,000 square kilometres. With a widely diverse population of 5,096 billion people, the continent's rich historical background offers a wealth of opportunities to explore, from the untouched steppes of Central Asia to the bustling economic centres of China and Japan. Iconic sights such as the Taj Mahal and the Temples of Angkor Wat draw tourists from around the world; researchers are attracted by the ancient civilisations of the region; and strong economic growth and up-and-coming markets are providing new footholds for businesses and investors alike.

This report provides some of the central facts and figures relating to 10 of the key e-commerce markets in the Asia region: China, India, Indonesia, Japan, Malaysia, Phillipines, Singapore, South Korea, Thailand and Vietnam. Together, these countries represent 86% of all e-commerce turnover in the Asia Pacific region, a figure which rises to 90% when Oceanic countries such as Australia and New Zealand are excluded.



AP = Asia-Pacific; NA = Northern America; EU = Europe; LA = Latin America; MN = Middle East & North Africa

E-commerce in Asia is flourishing – with \$770 billion in transactions annually, the Asia Pacific region leads the world. With countries acting as home to more than 60% of the world’s population, an expanding middle class, and Internet penetration and infrastructure improving in the less-developed countries, the region will continue to drive global online retail over the next five years. Access to financial services is a key stimulus for ecommerce. A lack of banking infrastructure in many countries in the region is exacerbated by barriers caused geographical and physical access to banking services. Increased Internet penetration will aid in removing these barriers, but with some areas having an account penetration of as low as 2%, many countries will continue to rely on cash as the main method of payment for some time to come. While, on average, 51% of the region’s population has access to an account with a financial institution, the extremely low income level of a significant proportion of the

population results in a high overall percentage of unbanked people. In spite of its growing middle class, China’s traditional rural economy and vast territory results in the country accounting for more than 12% of the world’s unbanked population. The expanding middle class is making a significant contribution to the growth of e-commerce across the Asia region. This group is expected to reach 1.7 billion by the year 2020, with China, India and Indonesia experiencing the greatest growth. With the increase in the number of options that e-commerce brings, consumers are also showing marked personal preferences, another trend driving year-on-year growth within the sector. This, in turn, is leading to increased competition, with traditional retailers moving to having an online presence (either individually, or by using an online marketplace), and local businesses experiencing pressure from regional and global brands which want a share of the growing sector’s profits.

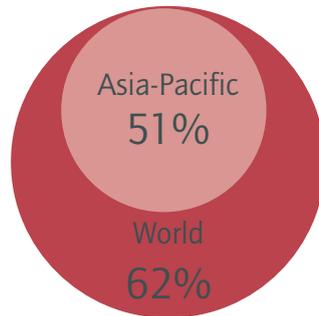
Again, China is a leading force in both the regional and global economy. Technology, naturally, is a major factor in changing economic patterns, with internet penetration playing a significant role. Notably, in spite of having the highest B2C e-commerce sales of any region in 2014, Asia has the lowest penetration of all regions globally (although 3 countries within the region fall into the global top ten – the traditionally developed markets of Japan, Singapore and South Korea). As infrastructure becomes more ubiquitous, e-commerce will continue to experience high growth as a result; countries with a low penetration rate, such as India, with only 18%, are expected to drive future growth. The young are traditionally the first to embrace new methods of doing anything, and it is no different in Asia. Young millennials (aged 18 – 24) are the most active group online, and use social media as their preferred form of communication –

IN 2014, ASIA HAD THE HIGHEST B2C E-COMMERCE SALES OF ANY REGION WORLDWIDE

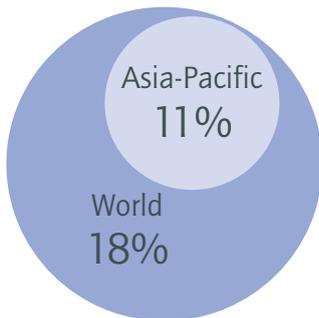
Facebook has more than 270 million active daily users in Asia alone. This familiarity with the online environment results in a willingness to embrace cashless payment methods, and this group exhibits different patterns of consumer behaviour to other demographics. The use of online payments varies throughout the region according to how developed the local market is. The more mature the market, the more likely it is that consumers in the country will use cards in order to pay for online purchases: for instance, in Japan and South Korea, 63% and 83% of online purchases respectively are paid by card. In contrast, emerging markets such as India and Malaysia continue to prefer cash based payment methods. Overall, cash based payments are increasingly being displaced by electronic payment methods throughout the region.



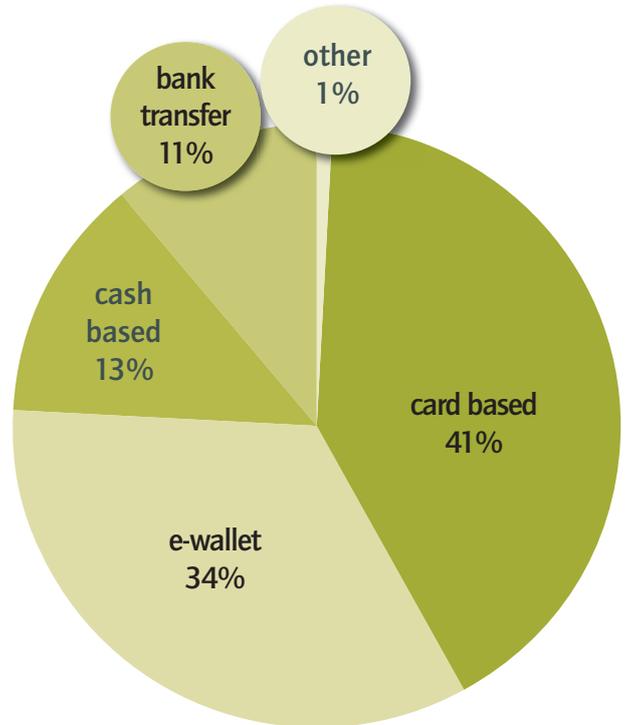
SOME BUBBLES ABOUT ASIA



Bank Account Penetration



Credit Card Penetration

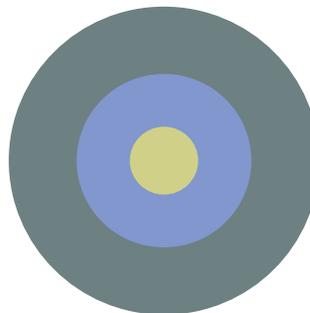


Share of e-commerce transactions

5,096 m people live in Asia-Pacific 100%

1,550 m people use the internet 37%

523 m people shop online 13%





COMPUTOP'S PAYMENTS & E-COMMERCE REPORT

COUNTRY BREAKDOWN

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CHINA



The world's most populous country, China is also one of the fastest-growing major economies. The country's high levels of productivity, low labour costs and relatively well-developed infrastructure make it a manufacturing leader, and the world's largest exporter of goods. Economic and political reforms have resulted in an expanding middle class and an increasingly urbanized population, leading to a wealth of new business and commercial opportunities for domestic and foreign companies alike.

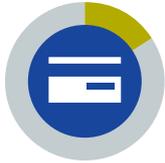
FINANCIAL INCLUSION

Financial inclusion in China is high: 79% of the country's inhabitants have access to a bank account, in contrast to 62% of the global population, and 51% of the APAC region. The "Big Four" banks compete against each, while working together with the Chinese government to offer access to banking services in Tier

1, Tier 2 and Tier 3 cities. Although digital banking is becoming mainstream, credit card penetration is relatively low at 16%, against 11% throughout the APAC region. Most transactions in China and Hong Kong are processed via China Union Pay, with the society overall remaining heavily cash-oriented.



79%
banked population



16%
credit card penetration

INTERNET & SMARTPHONE PENETRATION

50.1% of China's population has access to the Internet, a significant lead on the global figure of 40.7% and APAC's 40.7%. However, there is still a marked gap between those in urban areas (56% of the Chinese population in 2015), where Internet penetration is 72%, and rural areas where penetration is 28%. When it comes to smartphones, China is a booming market.

In 2015, smartphone penetration was 51%, 10% higher than the global figure, and the country accounted for 28% of smartphone users worldwide, acting as home to several local manufacturers. However, indications show that the growth of the Chinese smartphone market is slowing.



50%
internet penetration



51%
smartphone penetration



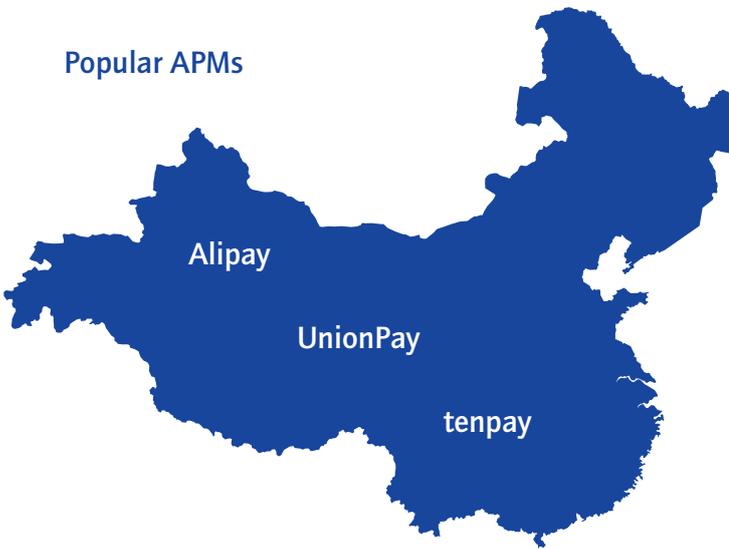
CHINA

E-COMMERCE TRENDS

E-commerce currently accounts for 16% of all retail in China, with an average spend per shopper of \$1,703 USD in 2014, resulting in a B2C e-commerce sector worth \$538 billion USD. With growth of 63.8%, the e-commerce market increased at a CAGR of 57% between 2010 and 2014. E-commerce is being driven

by rapid smartphone adoption, increasing Internet penetration, the availability of secure online payment mechanisms, reduced delivery times, and a preference for online shopping. This is particularly notable among the rural population due to limited bricks-and-mortar options.

Popular APMs

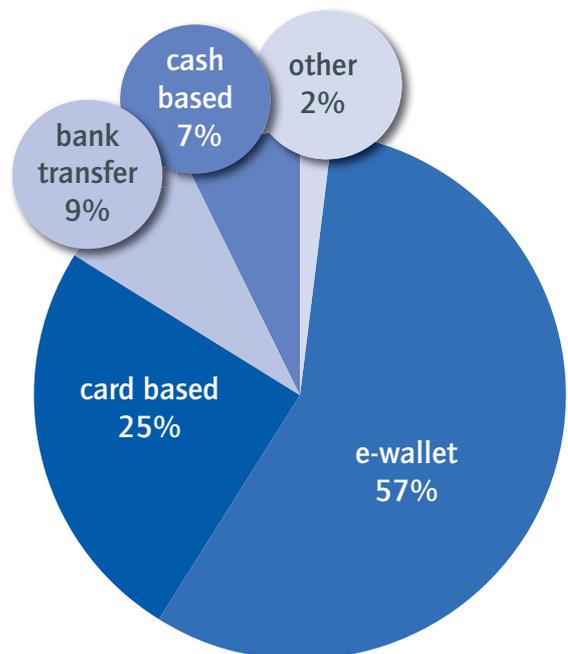


population: 1.357 bn
GDP: 10,354.8 bn USD
GDP per capita: 7,590 USD

HOW PEOPLE PAY ONLINE

E-wallets are the most popular form of payment online, being used for 48% of transactions. Card-based payments account for 32% of transactions, followed by bank transfers (10%) and cashbased payments (8%), with other methods making up a mere 2% of online payments. The most popular e-wallets are Alipay, with a market share of 40% - 50%, a potential reach of 400 million users, and mobile transactions totalling \$1,129 billion USD in 2015.

Tenpay accounts for 15%-20% of transactions, with a potential reach of 300 million users. Unionpay, China's national bank card network, is used in 10%-15% of transactions. It operates up to 90% of credit and debit cards within the country, and currently has 5 billion cards in circulation.



Share of e-commerce transaction



INDIA

With a population of more than 1 billion, India is the world's second most populous country, and a fast-growing major economy, averaging an annual GDP growth of 5.8% over the past two decades. A rapidly growing workingage population, rising education standards and a growing consumer market driven by the expansion of the middle class are all key factors in India's future economic success.

FINANCIAL INCLUSION

Although bank account penetration rose to 53% in 2014 from 35% in 2011, the country has one of the highest rates of dormant accounts in the world. There are approximately 700 million accounts among a

population of 1.3 billion. Credit card penetration is relatively low at 4%, compared to 11% throughout the APAC region, with approximately 21 million cards in use.



53%
banked population



4%
credit card penetration

INTERNET & SMARTPHONE PENETRATION

India has the second-highest global Internet user base, with one-third of the population (375 million people in December 2015) having access. 60% of Internet users access goods and services using a smartphone as their primary device. Consequently,

although smartphone penetration was at 26% in 2015, compared to 42% in APAC, the potential for growth is enormous: 100 million smartphones were shipped in India in 2015.



30%
internet penetration



26%
smartphone penetration

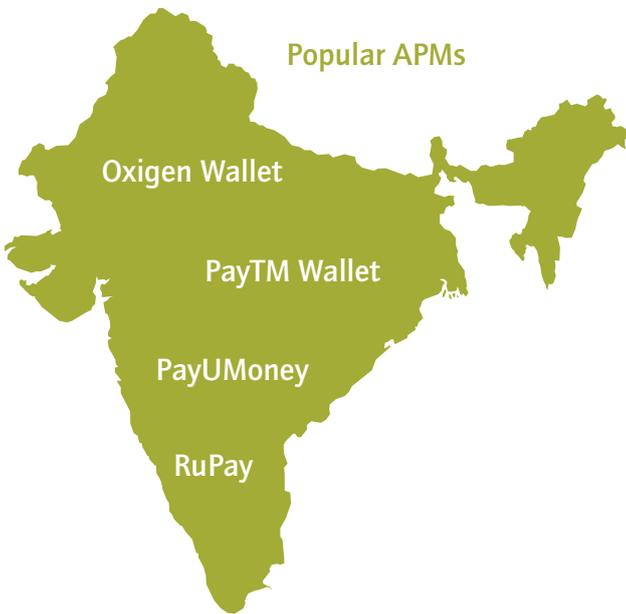


INDIA

E-COMMERCE TRENDS

With a total value of \$19.3 billion USD in 2014, India's B2C e-commerce sector is relatively small. Although e-commerce grew by 20.8% in 2015, the average spend per shopper of \$487 USD in 2014 was relatively low when compared to the global average of \$1,304. As access to online payment methods and

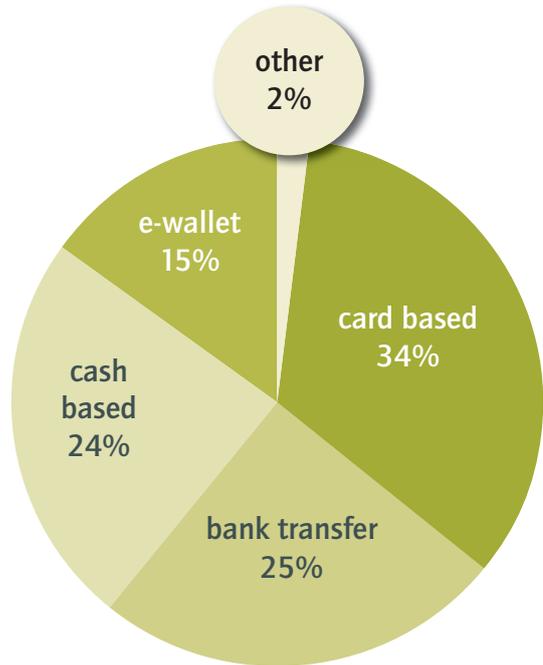
banking services are limited in many parts of the country, many consumers use cash on delivery. In spite of this, non-cash transactions are rising in popularity, with online banking, debit cards and prepaid cards all becoming increasingly viable options.



population: 1.252 m
 GDP: 2,048 bn USD
 GDP per capita: 1,581 USD

HOW PEOPLE PAY ONLINE

Cards are used in 34% of online transactions, with bank transfer being the second most popular method of payment (25%). 24% of payments are cash-based, while e-wallets and other methods account for 15% and 2% of transactions respectively. Oxygen and PayTM are two of the most popular e-wallets, with 20 million and 122 million active users in 2015. Oxygen accounted for \$1.5 billion USD in online and offline transactions in 2015, while PayTM is used in 2.5 million transactions per day. PayUMoney, MobiKwik and ItzPay are other popular e-wallets, with potential reach ranging from 5 million wallets (PayUMoney) to 105 million accounts (ItzPay). When it comes to card payments, the RuPay card scheme is a direct competitor to Visa and Mastercard; although it currently accounts for only 2% of online transactions, usage is expected to increase rapidly, with 247 million cards being issued by 2016.



Share of e-commerce transaction



INDONESIA

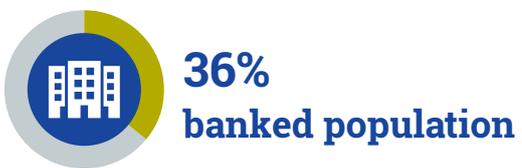


Made up of more than 13,000 islands, Indonesia is the world's fourth most populous country. It has played a key role in trade in the region for many hundreds of years, and a wide range of natural resources such as oil and natural gas support the country's economic success. The country is also the world's largest producer of palm oil. Ethnically diverse, and with a strong track record in industrial and automotive manufacturing, Indonesia also has a flourishing tourist industry, attracting large numbers of visitors from around the world, and particularly from other countries in the APAC region.

FINANCIAL INCLUSION

36% of Indonesia's population has access to a bank account, and this is expected to increase as prosperity grows. The top 4 banks account for over 90% of accounts, making Indonesia a highly concentrated

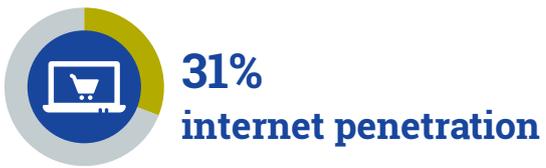
market. Credit card penetration, however, is very low at 2%, with most Indonesians preferring to use either cash when paying in person, or bank transfer when shopping online.



INTERNET & SMARTPHONE PENETRATION

As with banking, the government is taking measures to increase Internet penetration. With an online population of 78 million, only 30% of Indonesians have access to the Internet. Smartphones play an important

role here: it is estimated that mobiles accounted for 70% of web traffic in 2015. Smartphone penetration was 37% in 2015, with the penetration rate growing at a CAGR of 35%.



INDONESIA

E-COMMERCE TRENDS

Indonesia's e-commerce sector is still emerging, primarily because of limited infrastructure and access to the Internet. The B2C e-commerce sector was worth \$2.4 billion USD in 2014, with an average spend of \$489 per shopper. The market is mainly driven by wealthy Indonesians in second-tier cities which have

limited retail opportunities. Social media plays a crucial role, with 95% of online consumers in Indonesia obtaining information about products and services via social networks or forums such as Facebook and Kaskus, the country's largest forum site. 50% of online shoppers also make their purchases via these platforms.

Popular APMs



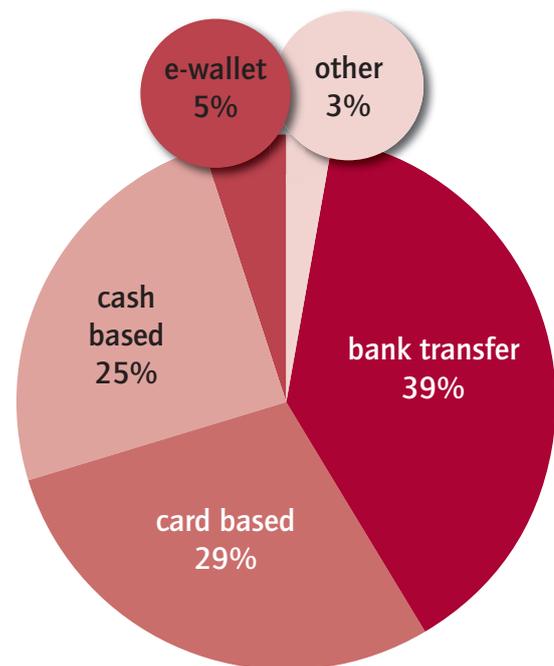
population: 249.9 m

GDP: 888.5 bn USD

GDP per capita: 3,492 USD

HOW PEOPLE PAY ONLINE

Bank transfer is used in 39% of e-commerce transactions, with card-based purchases accounting for 29%. 25% of cash-transactions are cash-based, while e-wallets and other forms of payment are the least preferred methods, making up 5% and 3% of transactions respectively. Bank transfers are supported by the major Indonesian and multinational banks, which offer online payment services. Alfamart offers cashbased payment options via a large network of convenience stores. Although e-wallets are a less popular form of payment, there are several e-wallet schemes which provide options to top up the wallet using cash (DOKU) or credit/ debit cards, Internet and mobile banking (Veritrans). KasPay, the payment system for the Kaskus website, is only used by a few online merchants, but enables consumers to purchase goods and services via this platform.



Share of e-commerce transaction



Japan's 126 million people make up the tenth largest population in the world, with around 9 million of them located in Tokyo, one of the leading global cities. The country is the world's fourth largest exporter of goods, and provides a base for many major enterprises such as Panasonic and Toyota. Japan ranks highly in terms of global competitiveness, but an aging demographic is presenting new challenges to the country's traditionally successful economy.

FINANCIAL INCLUSION

As Japan is a mature economy, financial inclusion is extremely high with 97% of the population having access to a bank account. Credit card penetration is high at 66%, well above the APAC average of 11%, and higher than many other developed countries such as the

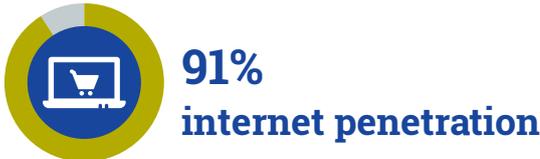
UK or the USA. Japan's international credit card brand, Japan Credit Bureau, was established in 1981 and enjoys an almost 20% share of the domestic market. It has also been rolled out in 190 other countries.



INTERNET & SMARTPHONE PENETRATION

An online population of 51.8 million people, or 90.6%, ensures that Japan's Internet penetration is higher than most OECD countries and Asian countries. This is reflected in the country's online shopping habits. At 49%, smartphone penetration is surprisingly low

in comparison to the region's 41%, and the global penetration figure of 42%. Although young Japanese people almost invariably own a smartphone, adoption among the older population remains slow.





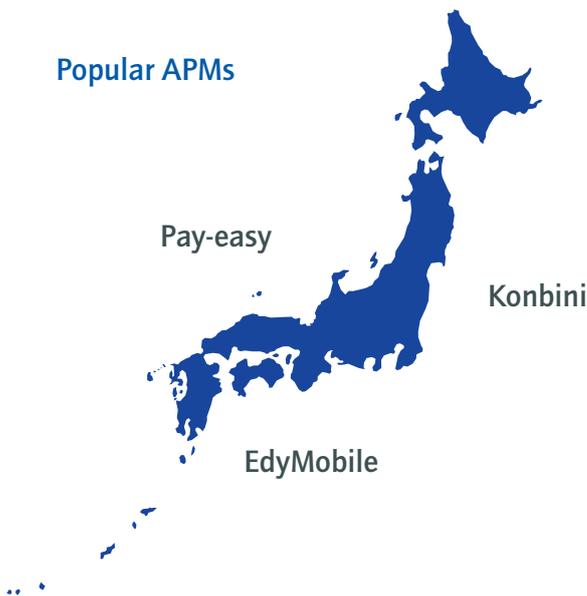
JAPAN

E-COMMERCE TRENDS

Over 73 million people shop online in Japan, making it the world's fourth-biggest e-commerce market. With an average spend of \$1,885 USD per shopper against the global figure of \$1,304 USD, the B2C e-commerce sector was worth \$70.2 billion USD in 2014. Three marketplace sites – Rakuten, Amazon Japan and Yahoo Japan –

make up around 50% of all Japanese e-commerce revenue, with Rakuten accounting for roughly 30% of e-commerce market share alone. 10.2% of Japanese consumers choose to shop cross-border, making their purchases from overseas websites.

Popular APMs

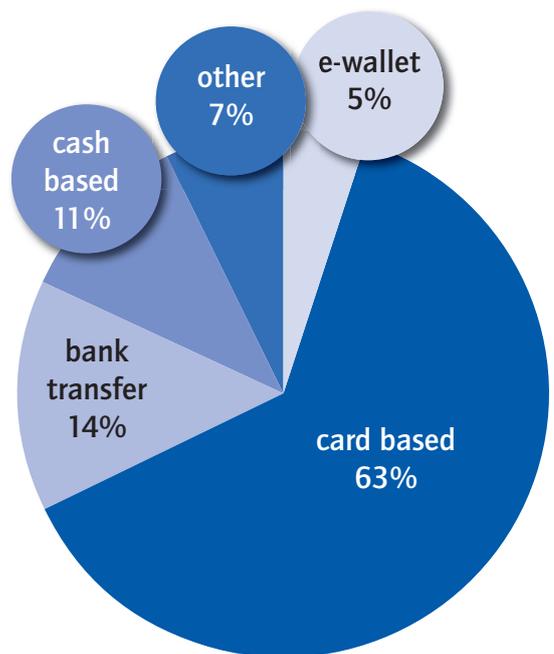


population: 127.3 m
GDP: 4,601.5 bn USD
GDP per capita: 36,194 USD

HOW PEOPLE PAY ONLINE

Cards are the most popular method of payment, making up 63% of online transactions. Other payment methods, such as bank transfer (15%), cash-based transactions (11%) and e-wallets (5%), are far less popular, accounting for 30% of transactions overall.

The Pay-easy bank transfer system allows the consumer to either select their bank of choice, and then complete online payment using that bank's interface, or to make a note of the payment reference, and make the transaction at one of the many ATMs displaying the Pay-easy logo. Cash-based payments can be made through a network of 50,000 convenience stores, providing Japan's entire population with access to this payment method.



Share of e-commerce transaction



MALAYSIA

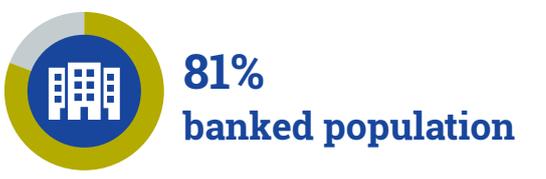


With 30 million inhabitants, Malaysia is relatively small compared to other countries in the APAC region. This, however, has not hindered economic success: the country has one of the best economic records in the region, with GDP growth averaging an annual 6.5% over the last half century. Malaysia ranks as the third largest economy in South-East Asia, and the export of natural resources such as petroleum combined with successful technology engineering help drive the country's economic success.

FINANCIAL INCLUSION

With 81% of Malaysia's population having access to a bank account, penetration is high in comparison to neighbouring countries. Credit card penetration is the second-highest in the region after Singapore; 20% of Malaysians have access to a credit card. This

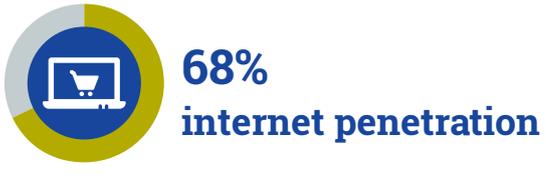
is a reflection both of the high proportion of banked inhabitants, and of the country's growing middle class. Online banking is becoming increasingly popular in Malaysia.



INTERNET & SMARTPHONE PENETRATION

Malaysia has an online population of over 20 million, giving the country 67.5% Internet penetration, or almost double the regional average of 37%. Smartphone penetration stands at 41%, corresponding to both

regional (41%) and global (42%) averages. 35% of smartphone users gain access to the Internet exclusively via their smartphone.



MALAYSIA

E-COMMERCE TRENDS

Strong growth in mobile Internet is supporting the Malaysian e-commerce sector which experienced 31% CAGR from 2010 to 2014. The B2C e-commerce sector is significantly smaller than other countries in the region, being worth \$0.7 billion USD. E-commerce

accounts for a mere 0.2% of retail sales, with an average online spend per shopper of \$412 USD. In contrast to other countries in the region, 40% of Malaysian e-commerce is cross-border.

Popular APMs



population: 29.7 m

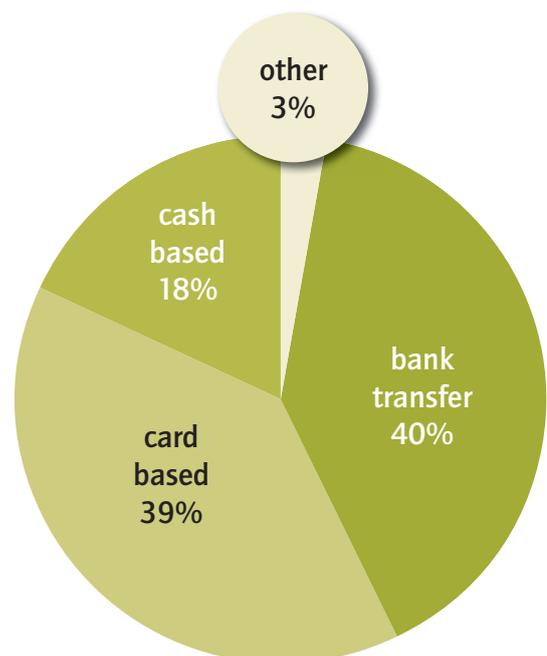
GDP: 338.1 bn USD

GDP per capita: 11,307 USD

HOW PEOPLE PAY ONLINE

Bank transfers make up 40% of online payment transactions, with card-based payments accounting for 39%. Cash is used in 18% of payments, while other methods are used in 3% of cases. Online bank transfers are offered by local banks such as Maybank2u, HongLeong and RHB, accounting for a market share of 30%-40%.

Malaysians often choose to pay at convenience stores, with online merchants being alerted once a transaction is processed in-store.



Share of e-commerce transaction



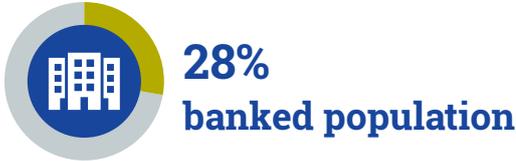
PHILIPPINES

The Philippines ranks 12th in the world in terms of population with over 100 million inhabitants. This large and rapidly growing population contributes to the country's economic potential. The Philippines' emerging market is transitioning from being based on agriculture to one that is increasingly supported by services and manufacturing. In recent years the average annual GDP growth has been low in comparison to other countries in the region, but service industries such as tourism and business outsourcing are opening up new economic opportunities.

FINANCIAL INCLUSION

Bank account penetration is low in the Philippines: at 28%, more than two-thirds of the population are currently unbanked. This is because the Filipino population uses remittance centres, rather than

traditional, formal banks, to serve their financial needs. Credit card penetration is extremely low at 3%, with the credit card sector being effectively non-existent in the country.



INTERNET & SMARTPHONE PENETRATION

43% of the population, or 47 million people, currently have access to the Internet. Although Internet speeds are among the lowest in the region, Internet penetration has increased by 500% since 2011, the

fastest rate in South-East Asia. Smartphone adoption is also increasing rapidly, at an annual rate of 75% since 2010. The smartphone penetration of 37% in 2015 is expected to exceed 50% in 2016.



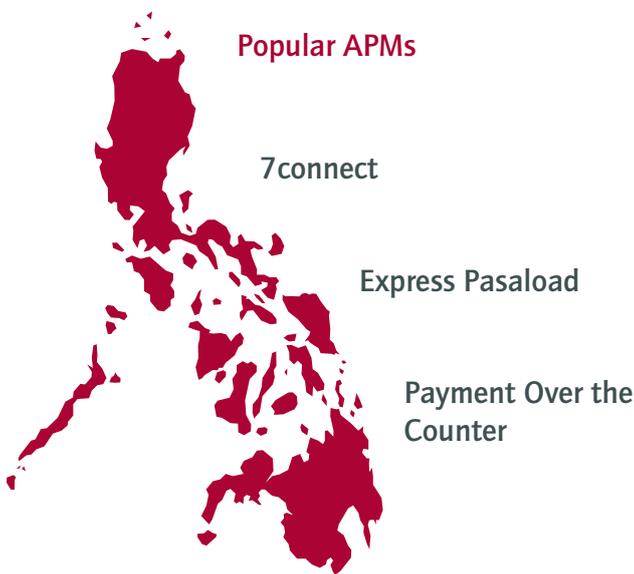


PHILIPPINES

E-COMMERCE TRENDS

E-commerce in the Philippines is limited by lack of infrastructure and low banking penetration. Both bank and non-bank payment solutions are offered by retailers in an effort to address the issue of unbanked consumers. Overall, the B2C e-commerce sector is worth \$0.7 billion USD, and online consumers spent an average of \$420 USD per head in 2014. The increase in

the number of smartphones has resulted in increased mobile commerce: Lazada, an online retailer, found that more than half its visitors in 2015 came via a mobile platform. Social media also plays a role in consumer preferences: the Filipino population is highly active on social media, with 90% of Internet users having a social media account.

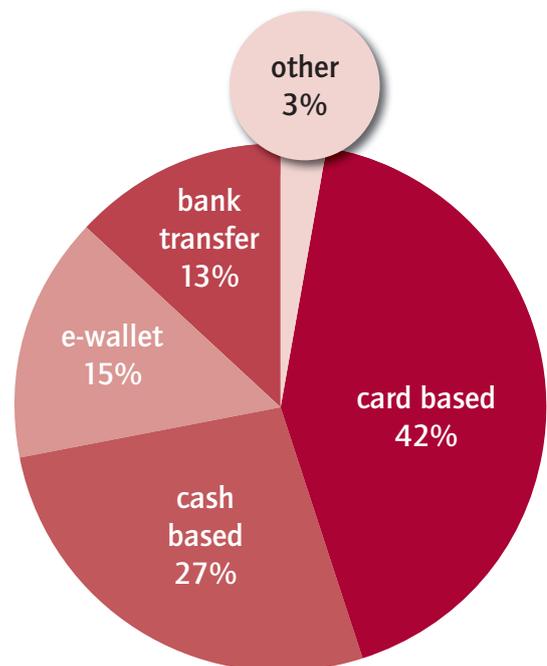


population: 98.4 m
 GDP: 284.8 bn USD
 GDP per capita: 2,873 USD

HOW PEOPLE PAY ONLINE

42% of payments for online transactions are card-based, with cash-based transactions a popular second at 33%. E-wallets were used in 15% of transactions, and bank transfer and other methods account for a further 16%. Many consumers find cash on delivery, or paying cash at a convenience store accessible options.

7Connect provides purchasers with the ability to note a transaction number, and then pay for the purchase over the counter at one of the country's many 7Eleven stores. Such schemes have a potential reach of 100% of online shoppers. E-wallets have a low market share, with schemes such as Smart Money partnering with 12 banks throughout the country.



Share of e-commerce transaction



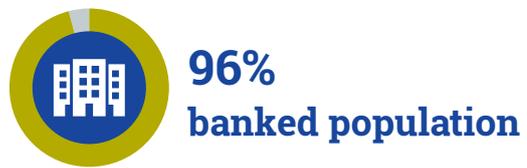
SINGAPORE

The densely populated island of Singapore is home to 5.5 million inhabitants and acts as a global commerce, finance and transport hub. Heavily dependent on external trade, and the 15th largest importer in the world, the country's highly developed market economy attracts a large amount of foreign investment and receives consistently high ratings from international firms. Financial services, manufacturing and oil-refining are the top sectors contributing to the economy, with tourism also playing a significant role.

FINANCIAL INCLUSION

With 96% of the population having access to a bank account, banking penetration is extremely high, both in terms of the regional average of 51% and the global figure of 62%. Credit card penetration is also high at

35%, and credit card transactions greatly outnumber debit card transactions. This reflects the sustained growth of the credit card sector experienced by Singapore over the last few years.



INTERNET & SMARTPHONE PENETRATION

82% of the population have access to the Internet, double the global figure of 40.7%, and the highest Internet penetration rate in the APAC region. Smartphone penetration is also extremely high at 82%.

However, 75% of Singaporean online consumers prefer to use a computer for their purchases. Social networks and gaming are highly popular online activities, and this reflects on e-commerce trends in the country.



SINGAPORE

E-COMMERCE TRENDS

Singapore's B2C e-commerce sector is relatively small at \$2.5 billion USD, but with a growth rate of 23.5%. The low turnover is due to the country's small population, and the fact that many consumers prefer to shop cross-border: transactions on non-domestic websites account for 77% of all online transactions. Smaller e-commerce sites, known as "blogshops" and selling fashion and accessories, are a popular online channel

in Singapore, with some blogshops having physical premises in addition to their online presence. With an average spend of \$1,861 USD per shopper, Singaporean consumers are heavily influenced by social media, with 80% saying that online opinion plays a role in their choice of purchase. Additionally, Singaporeans frequently use their smartphones to pricematch, often leaving a store if they find a product cheaper elsewhere.



population: 5.4 m

GDP: 307.9 bn USD

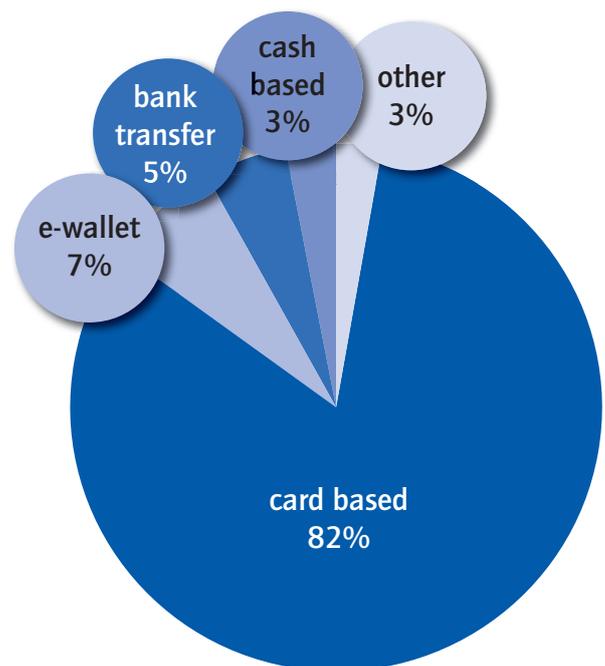
GDP per capita: 56,285 USD

HOW PEOPLE PAY ONLINE

With so many inhabitants of Singapore having access to a bank account/ credit card, it is unsurprising that 82% of online transactions are card-based. E-wallets are the second most popular form of payment, accounting for 7% of transactions, while cash-based payments, bank transfers, and other methods are used to complete remaining transactions.

PayPal is the most commonly used e-wallet; a competitor, MasterPass, was launched in 2014, and is accepted by several major merchants including Singapore Airlines.

Payment cards dominate the Singapore online payments market. Major e-wallet brands such as PayPal and MasterPass are also present.



Share of e-commerce transaction



SOUTH KOREA

Highly urbanized and highly developed, South Korea is home to over 50 million people, ranking 27th in the world in terms of population. The country's economy was one of the world's fastest-growing between the 1960s and 1990s and is ranked as a major economy. Many of the most successful South Korean companies – a number of which find inclusion in the Fortune Global 500 – have a strong focus on technological innovation.

FINANCIAL INCLUSION

Financial inclusion in South Korea is high, with 94% of inhabitants having access to a bank account, and a credit card penetration rate of 56%. This is among the highest in the world and five times the regional

average. Inhabitants of South Korea also use their credit cards more frequently than those in other countries, completing an average of 130 transactions in 2014.



94%
banked population



56%
credit card penetration

INTERNET & SMARTPHONE PENETRATION

South Korea scores highly when it comes to the Internet, with Internet penetration of 85.3% (significantly higher than both the world average and that for APAC) and the highest average Internet speeds

in the world. The country is also a leader in terms of smartphones – with a rate of 80%, it comes second in the APAC region only to Singapore, with penetration double the regional figure of 41%.



85%
internet penetration



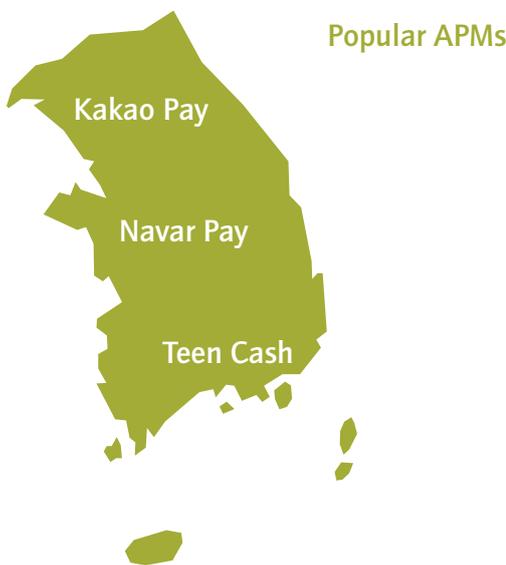
80%
smartphone penetration

SOUTH KOREA

E-COMMERCE TRENDS

The country's B2C e-commerce sector was worth \$25.9 billion USD in 2015, with an average spend per online shopper of \$1,050 in the preceding year. Overall, at 62% the country has the highest percentage of online shoppers in the APAC region, the majority of whom prefer to search for, and purchase items online.

A survey showed that only 14% of respondents would choose to search for goods online, then buy in a bricks-and-mortar store. The high rate of smartphone penetration also affects the sector, with 37.5% of transactions being generated via a mobile device.

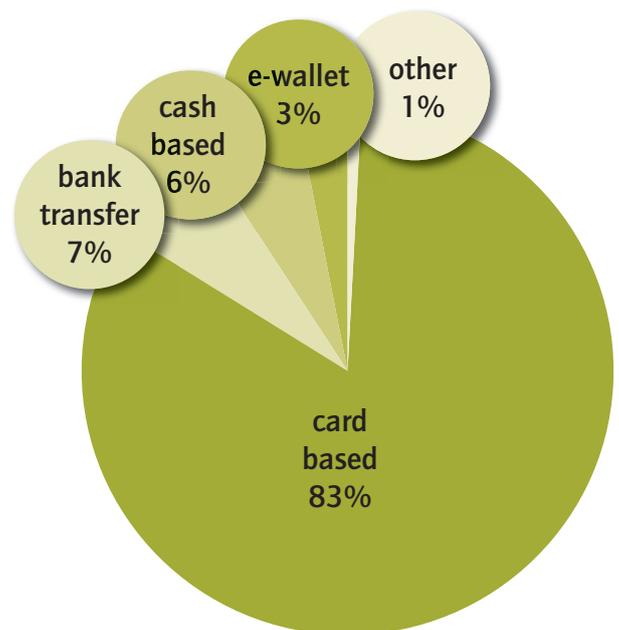


population: 50.2 m
GDP: 1,410.4 bn USD
GDP per capita: 27,971 USD

HOW PEOPLE PAY ONLINE

South Korea's high level of financial inclusion is reflected in payment choices, with 83% of online transactions being card-based. Bank transfers, cash-based payments, e-wallets and other methods are all significantly less popular, accounting for 7%, 6%, 3% and 1% of transactions respectively. E-wallets such as KakaoPay target smartphone users by offering in-app mobile payment services, which offer the opportunity to register multiple credit/debit cards to be used when completing transactions via the app.

Pre-paid cards such as Teen Cash are often used by those who are either not old enough to have a credit card, or who do not have access to one. Online purchases can also be paid for by mobile phone using ARS Mobile Billing, with the amount owing being deducted from the user's mobile balance.



Share of e-commerce transaction



THAILAND



With a population of around 66 million people, Thailand is the world’s 20th most populous country. The rapid economic growth experienced at the end of the last century has slowed, with political uncertainty affecting investor and consumer confidence. Export plays a major role in supporting the economy, accounting for more than two-thirds of GDP, with major exports being rice, rubber, cars and electrical appliances.

FINANCIAL INCLUSION

Although bank account penetration in Thailand is high at 78%, credit card penetration is a mere 6%, significantly lower than both the regional average of 11% and the global average of 18%. This is partially

due to the way in which Thai consumers perceive credit cards and their trustworthiness when used for online transactions. Many purchasers prefer to use cash-based methods of payment or bank transfers.



INTERNET & SMARTPHONE PENETRATION

Thailand has an online population of 24.3 million, or 35.9%, with growth of 6.4% projected for 2016. The penetration rate is lower than the global average of 40.7%, but in step with the 37% throughout the

APAC region. The smartphone penetration rate is 35%, and Thai smartphone users are highly engaged – over 30% of Thai consumers access applications on their mobile device every day.





THAILAND

E-COMMERCE TRENDS

Thailand's B2C e-commerce sector was worth \$1.6 billion USD in 2015, and this is projected to grow as improved infrastructure reduces logistics costs and provides cheaper delivery options. Overall, 66% of Thai Internet users shop online at least once a month, with 55% reporting having conducted price comparisons between online and offline channels. 53% of Internet users accessed the Internet via a mobile device, but

such devices are predominantly used for browsing. For instance, while 89% of users of the LINE communications app used their mobile to browse, only 56% actually completed a purchase. Thailand's social media base is large and growing, with Facebook boasting 28 million users, Twitter 4.5 million, and Instagram 1.7 million. This offers fertile ground for social commerce and the sharing of opinions on available goods and services.



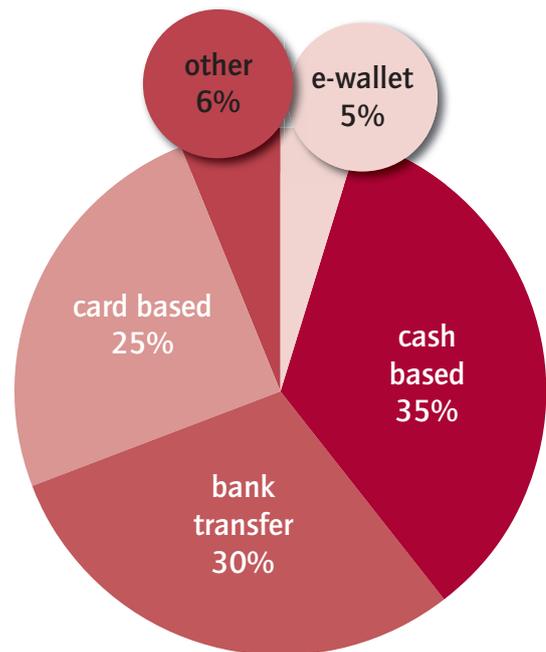
Popular APMs

population: 67 m
GDP: 404.8 bn USD
GDP per capita: 5,977 USD

HOW PEOPLE PAY ONLINE

Cash is the most popular payment method when it comes to paying for online purchases in Thailand, accounting for 35% of all transactions. Bank transfers are also widely used (30%), with card-based transactions making up a further 25%. E-wallets and other payment methods account for just over 10% of the total. Cash on delivery is one of the most popular payment methods, as any online shopper can make purchases this way. Thai consumers also have the option to pay over the counter using 1,2,3, which can be found in 35,000 locations, including convenience stores and bank branches.

A variety of e-wallet schemes are available, ranging from those such as Easy2Pay, which do not require a credit card, but which are topped up from the customer's previously paid account, and digio, an e-wallet which can be linked to an unlimited number of credit cards and bank accounts.



Share of e-commerce transaction



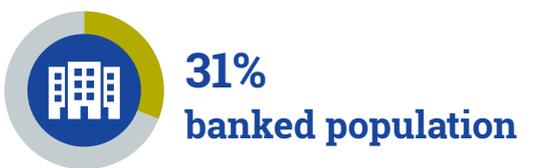
VIETNAM

Vietnam ranks as the world’s 14th most populous country with an estimated 90.5 million inhabitants in 2014. Manufacturing, information technology and high-tech industries make a substantial contribution to the country’s fast-growing economy, which has been predicted to have a potential growth rate of almost 10%. Agricultural export also plays a role, with Vietnam being the world’s second largest exporter of coffee. While many of Vietnam’s major trading partners come from the Asia-Pacific region, the country also has strong trade links with the US and the EU.

FINANCIAL INCLUSION

Only 31% of inhabitants of Vietnam have access to a bank account, and credit card penetration is almost nil. This low level of financial inclusion is expected to change in the near future; bank account penetration is higher in urban centres, with 52% of those living in such locations being banked. Additionally, the dynamic demographics and youthful population of Vietnam will cause high

growth in this area over the next few years. The exceptionally low level of credit card penetration is due to the minimum income requirements of card companies, with Vietnamese incomes falling well below this threshold. Moreover, with credit card penetration so low, credit card acceptance by merchants is also low, creating something of a vicious circle.



INTERNET & SMARTPHONE PENETRATION

Internet penetration in Vietnam is 36.2%, only slightly below average for the region. Smartphone penetration is in line with both global and regional figures at 42%, and growth in this area is expected to dramatically increase both Internet penetration and a rise in the number of

online services available within the country. E-commerce companies have found themselves limited by poor-quality Internet access over fixed lines, particularly in rural areas.



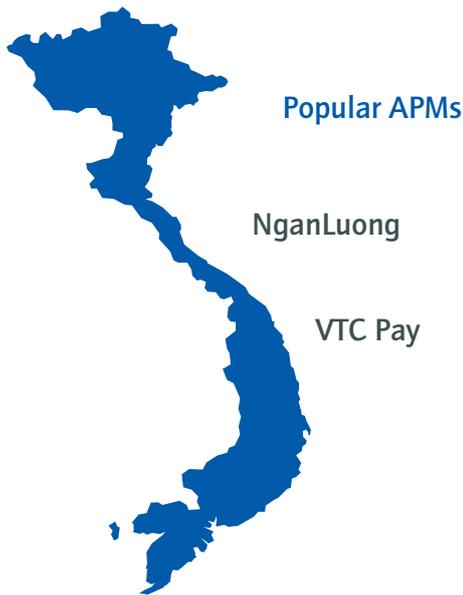


VIETNAM

E-COMMERCE TRENDS

With an average spend per shopper of \$145 USD, Vietnam's e-commerce sector was worth \$1.5 billion USD in 2014. A lack of infrastructure, an absence of usable online payment methods and long delivery

times have all hindered the sector's growth. Online consumers cite convenience and comfort as major motivators for shopping online, and social networks are often strongly linked to online shopping.

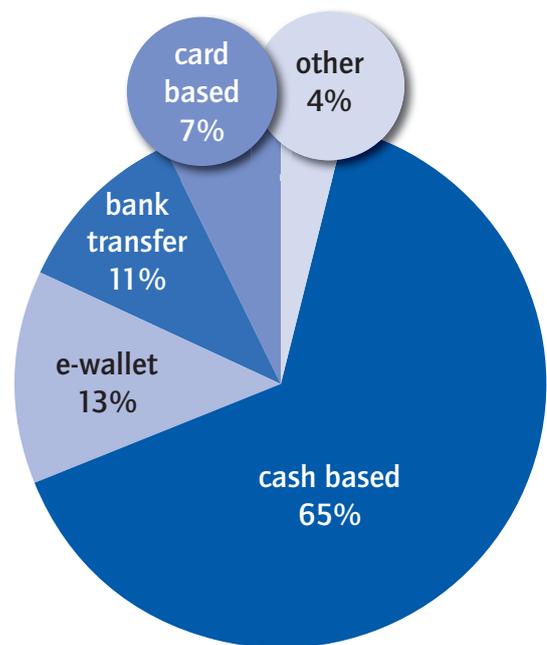


population: 89.7 m
 GDP: 186.2 bn USD
 GDP per capita: 2,052 USD

HOW PEOPLE PAY ONLINE

Cash is used to pay for 64% of all online transactions, with e-wallets the second favourite method of payment (13%). Bank transfers, cards, and other methods are used relatively rarely when paying for online purchases, a reflection of the low level of access to banking services in the country as a whole.

Cash-based payments include cash on delivery and the purchase of pre-paid cards such as VTC Telco Card, which can then be used to buy digital content services. VTC Intecom, the card provider, has 16 million active accounts and also offers VTC Pay, an e-wallet which can be used to make online transactions in a number of ways including local and international cards, or the e-wallet account itself.



Share of e-commerce transaction

Computop is a leading global payment service provider that provides compliant and secure solutions in the fields of e-commerce, POS, m-commerce and Mail Order and Telephone Order (MOTO). The company, founded in 1997, is headquartered in Bamberg, Germany, with additional independent offices in China, the UK and the US. Computop processes transactions totalling \$24 billion per year for its client network of over 14,000 large international merchants and global marketplace partners in industries such as retail, travel and gaming. Global customers include C&A, Fossil, Metro Cash & Carry, Rakuten, Samsung and Swarovski. In cooperation with its network of financial and technology partners, which it has expanded over many years, Computop offers a comprehensive multichannel solution that is geared to the needs of today's market and provides merchants with seamlessly integrated payment processes.

Sources: PPRO and Edgar, Dunn & Company



Computop have been partnering with PPRO for a number of years and many of the alternative payment methods mentioned in this guide are provided through this partnership. PPRO provides Computop access to, processing and collection services for alternative payment methods and value added services, all through one API. Computop's merchants can benefit from this partnership via only one contract for more than 100 alternative payment methods, via their same integration, a single platform and with only one settlement for multiple APMs.

<https://www.ppro.com/acquiring/>

For questions and inquiries about Computop's solutions, contact a payment specialist in your area or visit www.computop.com.

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