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BUSINESS APPLICATIONS OF CURRENT STATUS AND FUTURE PROSPECTS FOR
MOBILE INSTANT MESSAGING (IM) APPLICATIONS

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ABSTRACT

As developed countries improve in mobile internet technology, more people are switching from accessing the Internet on laptops and desktops to mobile phones and tablets. Together with better smartphones and internet access around the world, instant messaging applications (IM apps) have grown in popularity exponentially. IM apps were accessed on the mobile phone by 75 percent of Internet users around the world as of 2015 (Statista). Despite the average retention rate of IM apps being much higher compared to the average of all other apps (Statista), IM apps are seldom considered as an opportunity. Through the study of WhatsApp, WeChat and LINEs' MAU growth, profit model, services and cultural adaptations, differences in Asian-based IM apps and Western-based IM apps were noted. This could help businesses determine which IM app to consider when they try to advertise in a target country, considering the popular services provided by the apps and the mobile social penetration of the country. Strategies of successful m-commerce are discussed to keep up with the next trend of shopping online.

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Chapter 1

Introduction

As developed countries improve in mobile internet technology, more people are switching from accessing the Internet on laptops and desktops to mobile phones and tablets. Together with better smartphones and internet access around the world, instant messaging applications (IM apps) have grown in popularity exponentially. IM apps were accessed on the mobile phone by 75 percent of Internet users around the world as of 2015 (Statista). IM apps are a type of online chat that offer real-time text transmission over the Internet. They are low – or no – cost alternatives to short messaging services (SMS), since they only require Wi-Fi or data plans that allow users to be connected to the Internet as long as they are within the service boundaries for the users to enjoy their services.

Although many businesses target social media to advertise and potentially grow their market share, IM apps are seldom considered as an opportunity. It is important to note that the average retention rate of IM apps is much higher compared to the average of all other apps (Statista). As of January 2015, the average retention rate of all apps other than IM apps during the 1st, 6th and 12th month were 36 percent, 18 percent and 11percent respectively. The average of IM apps were 68 percent, 62 percent, and 62 percent: almost six times as much. Furthermore, dominant IM application differs by countries and services they provide, thus it would be easy to target different audiences through different apps, depending on who their target audiences are.

In this paper, the author will be comparing three different IM apps that are popular in different regions of the world: WhatsApp, WeChat and LINE. The research questions includes:

- 1) What causes the growth rate of MAU to slow down, and eventually stay stagnant?
- 2) How does the services differ for different regional areas?
- 3) Does higher MAU indicate a higher profit?
- 4) What data should businesses look for when considering entering a new market?

From the study of how the three successful IM apps differ in the MAU growth, profit model, services and cultural adaptations, recommendations will be made for businesses to adopt the use of IM advertising and to increase m-commerce sales.

Chapter 2

Description of WhatsApp, WeChat and LINE

WhatsApp

WhatsApp, a cross-platform mobile messaging app, is an alternative for short message service (SMS) at no cost. Besides operating on smartphones and tablets, WhatsApp Web was launched on January 2015, allowing users to get access to WhatsApp on their computers. Started in 2009, WhatsApp has the biggest MAU of one billion as of February 2016, making it the most popular IM app up to date (see Appendix for the growth of MAU). It is mostly popular in Latin Africa with a penetration rate of 66 percent in Q4 of 2015 (Statista, 2016). On 19 February 2014, Facebook Inc. acquired it for US\$19 billion to bring more connectivity and utility to the world (Bounds, 2014).

WeChat

WeChat (also known as Weixin in China) is one of the fastest growing market leaders in China owned by Tencent. Tencent is also the owner of QQ, the most popular social platform in China. Weixin started in 2011, and Tencent gave it a new name “WeChat” in April 2012 to expand its market internationally. Even though WeChat is the international version of Weixin, Tencent always refer to the two separately. There are different official account systems of

WeChat and Weixin, which could be related to political influence (Chinachannel, 2015). Weixin is regulated by the Chinese government and is monitored strictly, whereas WeChat is more lenient on censorship since it is not subject to any of the rules and regulations (The Economist, 2014). The phone number used to register for the app, language setting and system setting of the user's phone determines whether the specific user is under Weixin or WeChat. For example, WeChat users in America have yet to access services similar to Weixin Pay, a mobile wallet service provided to Weixin users. For this research, "WeChat" would be used to refer to both Weixin and WeChat users and services for convenience.

This fast-growing app has a MAU of 649.5 million as of November 2015, a growth of 33.8 percent in one year (Techinasia, 2015). The number of active users have been growing steadily since Q4 of 2013 at an average of 9.0 percent per quarter, after the huge leap of 30.6 percent from Q3 to Q4 of 2013 (see Appendix for the growth of MAU).

LINE

Launched in 2011, LINE is among the top ten most popular messaging apps. Its core markets are located in Japan, Taiwan, Thailand and Indonesia, which covers 67.3 percent of the MAU (Millward, 2015). In February 2013, LINE Corporation was created following the huge success of LINE, when NHN Japan announced to split its gaming and Internet services businesses (Brian, 2013).

The Japan earthquake in March 2011 inspired employees of NHN Japan, a subsidiary of South Korea's NHN now known as Naver, to design the application (Bushey, 2014). When the

nuclear meltdown of Fukushima Daichi plant occurred, resulting from the 30-foot high tsunami disabling the power supply and cooling of the reactors, more than 18,000 people were confirmed dead. At the time of the crisis when people were eager to know about their families and friends' safety, Japan's phone system became unreliable because of the damage to the Japan's telecommunication infrastructure. As an alternative method, data messaging became the primary mode of communication. To ensure effective communication between families and friends in case of future disaster, LINE application was launched three months later (Bushey, 2014).

Despite a great start with gaining 50 million users in less than a year, LINE is facing a problem with slow MAU growth since Q1 of 2015 (see Appendix for the growth of MAU). There was six million MAU growth from Q1 to Q2 of 2015, and one million MAU growth from Q2 to Q3 of 2015 (Naver, 2016). As of December 2015, LINE has 215 million MAU.

Chapter 3

Comparison of the three IM apps

MAU growth

Table 1 shows the compilation of MAU of the three IM apps and the actual number of growth of MAU in three months interval from July 2013 to January 2016. In cases where the companies did not report the number of active users for a certain quarter, the average number of the previous quarter and the following quarter were used. Despite launching in 2011, LINE only started reporting their MAU from October 2014. The growth of active users are the difference between the number of users of the reported month and the number of users in the previous quarter.

Month	Active users (in millions)			Growth of active users (in millions)		
	WhatsApp	WeChat	LINE	WhatsApp	WeChat	LINE
Jul-13	275	236				
Oct-13	350	272		75	36	
Jan-14	430	355		80	83	
Apr-14	500	396		70	41	
Jul-14	575	438		75	42	
Oct-14	638	468	170	63	30	
Jan-15	700	500	181	62	32	11
Apr-15	800	549	205	100	49	24
Jul-15	860	600	211	60	51	6
Oct-15	920	650	212	60	50	1
Jan-16	980	697	215	60	47	3

Table 1: Comparison of MAU

The table was used to create graphs to compare the growth rate of IM apps (Figure 6) and the actual number of growths of MAUs (Figure 7). Linear trend line is included for each graph in Figure 6 to show the gradients.

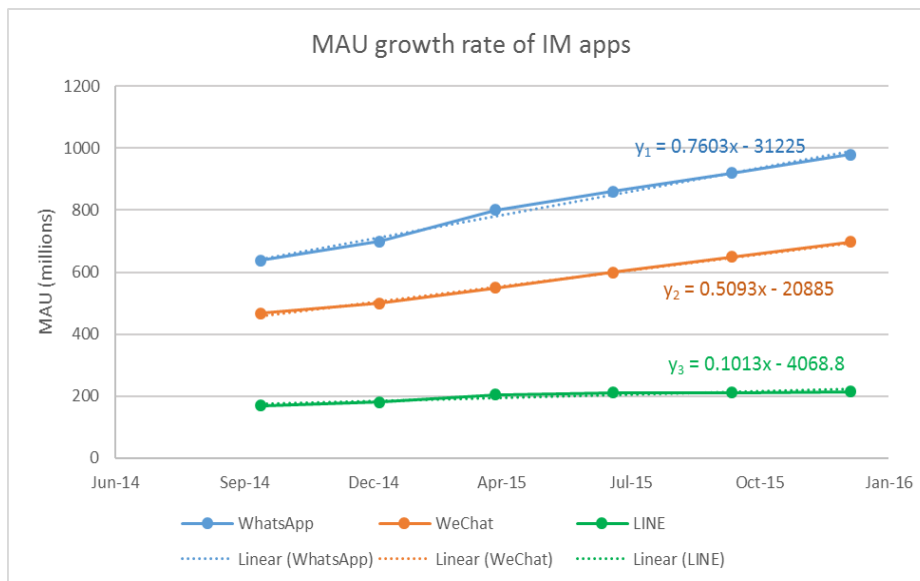


Figure 1: Growth rate of IM apps

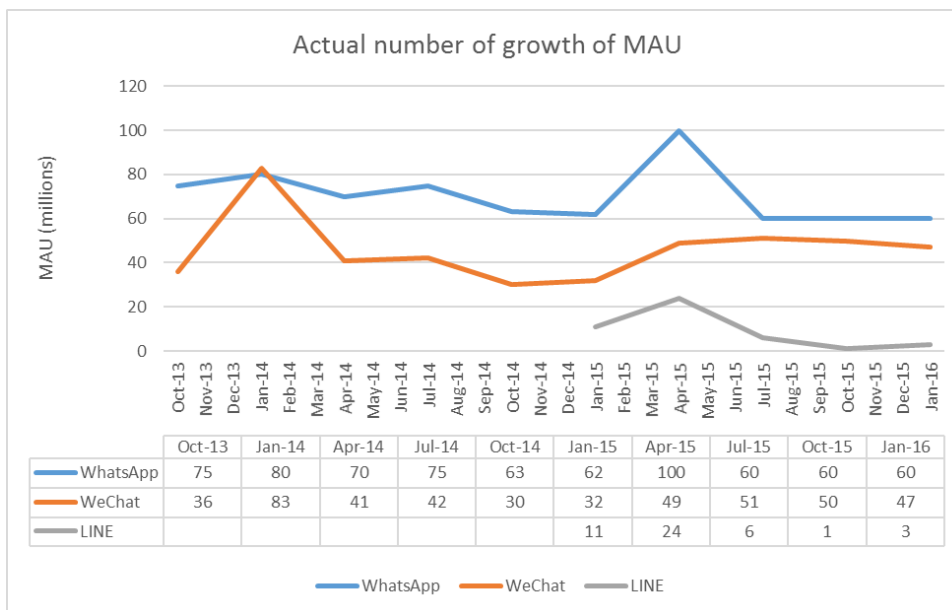


Figure 2: Actual number of growth of MAU

WhatsApp’s MAU has been growing the fastest, followed by WeChat then LINE.

Despite WhatsApp not providing as many services as the other two IM apps, WhatsApp has been growing at the fastest rate with the highest number of MAU. LINE is facing a hard time gaining

MAU since Q3 2015, where the growth has only been between one to six million users. It is partly due to the fact that LINE has not been able to penetrate into new markets (Millward, 2015). Japan, Taiwan, Thailand and Indonesia markets make up 67.3 percent of LINE's MAU, an increase of 2.3 percent since October 2015, and an increase of 7.3 percent since April 2015. On the other hand, WhatsApp was able to capture new markets such as India and Brazil, where growth in mobile social users hit 16 percent and 13 percent in one year respectively (Wearesocial, 2016). Even though WeChat has not been able to penetrate new markets, it has still been growing at a steady pace because China itself is growing at 14 percent in the number of active mobile social network users (Wearesocial, 2016).

Service/Features of the applications

The scope of services covered by the three IM apps are very different. WhatsApp only serves as a basic messaging app, providing only most of the basic messaging and call features. On the other hand, WeChat and LINE is more than just basic messaging apps. The following tables summarize the comparison of basic features of IM apps.

	WhatsApp	WeChat	LINE
Media transfer	✓	✓	✓
Message delivery receipts	✓	✓	✓
Group chat	✓	✓	✓
Voice messaging	✓	✓	✓
Stickers	✗	✓	✓
PC	✓	✓	✓

Table 2: Comparison of basic messaging features

	WhatsApp	WeChat	LINE
Voice calls	✓	✓	✓
Video calls	✓	✓	✓
Group calls	✗	✓ (similar service called <u>Walkie Talkie</u>)	✓

Table 3: Comparison of call features

	WhatsApp	WeChat	LINE
ID	✗	✓	✓
Shake	✗	✓	✓
QR Code	✗	✓	✓
Sending location	✓	✓	✓

Table 4: Comparison of features to find friends on the app

	WhatsApp	WeChat	LINE
Moments	✗	✓	✓
Games	✗	✓	✓
Friend radar	✗	✓	✗
People nearby	✗	✓	✗

Table 5: Comparison of interaction features besides messaging

WeChat services

Besides the features listed on the tables above, WeChat has more to offer to the users. WeChat “cares more about how relevant and central WeChat is in addressing the daily, even hourly needs of its users” (Chan, 2015). The most attractive service besides basic messaging would be WeChat Payment – a platform accessed through WeChat Wallet. Within WeChat Payment, there are services such as quick pay, money transfer, mobile top up, wealth, ordering taxi, paying utilities, city services, purchasing movie tickets, purchasing flight and train tickets,

donation to charity and Red Packets. Red packets are monetary gifts that are presented during special occasions in China, such as weddings and Chinese New Year. The use of red packet feature in WeChat peaked during 2016 Chinese New Year (February 7 – 12), with 420 million users sending and receiving more than 8 billion red packets (WeChat, 2016).

“City Services” is a new service launched in March 2015 in three pilot cities, namely Shenzhen, Foshan and Guangzhou. Besides checking the weather, air conditions and maps, there are also options including:

- Driving fine payment
- Checking real-time traffic situations through police cameras on the streets
- Booking annual vehicle examination
- Scheduling ID-related services
- Checking state exam results
- Scheduling marriage ceremony
- Booking appointment for divorce procedures
- Paying vehicle taxes and checking tax records
- Booking appointment for newborn registration
- Booking appointment for housing registration
- Booking appointment for new passport application

Introduction of these services could reduce traffic jams and long lines in hospitals and government-related offices (JINGdigital, 2015). It is evident that Tencent is broadening the services covered by WeChat so that it becomes a necessity for all Chinese residents.

LINE services

LINE also has a broad range of services offered to the users, although it focuses on communication and entertainment: similar to some extent, but different from WeChat.

LINE Store, accessible through the LINE app, allows users to download free or purchase a greater variety of stickers, games, themes, LINE Play (personalized avatar) and LINE Out.

LINE Out is a call function that allows users to call mobile or mainline phones by purchasing call credit from the store. Besides, LINE Family Apps includes:

- LINE HERE – sharing of real-time location with friends
- Emoji LINE – free keyboard app with stickers and emoji
- Popcorn Buzz – free group calls with up to 200 people
- LINE@ – for businesses to communicate with fans and/or customers
- LINE TV (only available in Thailand and Taiwan)
- LINE Camera, B612 camera app and SnapMovie
- LINE Deco – smartphone decoration app
- LINE Dictionary
- LINE Antivirus
- LINE Greeting Card
- LINE Tools – includes measurement tools, timer, calculator, flashlight, mirror, magnifying glass, QR code reader and Japanese year converter
- LINE Shop (only available in Thailand)

Other than these services available globally including the payment platform LINE Pay, there are other services that are only available in Japan. They include news, manga, LINE Mall,

forums for asking questions, fortune telling and taxi service. The launch of the taxi service in Tokyo in early 2015 shows that LINE is looking forward to broadening its services to become an everyday necessity, similar to WeChat.

Revenue/Profit model

WhatsApp

WhatsApp takes pride in its no-advertisement model. It used to charge all users one-time \$1 subscription fee after enjoying a year of free service, which seemed like the only way WhatsApp was making money out of it. However, WhatsApp removed all subscription fees starting from February 2016 (WhatsApp blog, 2016). In June 2014, WhatsApp made \$15 billion in revenue, and a net loss of \$233 billion (Facebook, 2014).

It is evident that Facebook did not acquire WhatsApp for revenue-driving purposes. Instead, Facebook values its goodwill – “expected synergies from future growth, from potential monetization opportunities, from strategic advantages provided in the mobile ecosystem and from expansion of our mobile messaging offerings” (Facebook, 2014). Facebook, after acquiring WhatsApp on October 2014, is not expecting to gain much revenue from WhatsApp over a long term.

Tencent

The main profit driver for Tencent, owner of WeChat and QQ, is Value Added Services (VAS), which includes online games. Revenue from online gaming increased by 33 percent to approximately RMB16 million (equivalent to US\$2.5 million) in Q4 of 2015. This growth is highly due to the rise of mobile phone games through expanded game portfolio, as well as PC client games (Tencent, 2016).

Advertising is also another crucial part to generating Tencent's revenue. Online advertisement and performance-based advertisement revenue grew by 118 percent and 157 percent respectively. The rise of performance-based advertisement, increasing the revenue to RMB2916 million (equivalent to US\$451 million), was mostly from Mobile Qzone, Weixin Official Accounts and Weixin Moments (Tencent, 2016).

With the increased utilization of Weixin Pay, bank handling fees came up to RMB300 million (equivalent to US\$46 million) primarily through money transfers in January 2016. To reduce the cost, Tencent decided to start charging users withdrawal fees for withdrawing from Weixin Pay wallet to the user's bank account for amounts greater than a certain value, starting from March 1, 2016. At the same time, C2C money transfers will not be charged for users on Weixin Pay (Tencent, 2016).

LINE

LINE revenue totaled JPY32.6 billion (equivalent to US\$300 million) as of Q4 2015, growth of 26 percent from one year ago (Naver, 2016). Advertisement, games and sticker sales

contributed to 33 percent, 37 percent and 23 percent of the total revenue respectively.

Considering an increase of 13 percent in MAU over a period of one year, there has only been 3.5 percent rise in games and 2.1 percent in sticker sales. However, there is slight increase in the “others” sector, which includes new services that LINE is expanding into, including taxi services and LINE Pay (Naver, 2016). The fame of LINE sticker characters led to the opening of theme park exhibition in Taiwan between January 25, 2014 and April 27, 2014. Pop-up stores are also located around the world, selling products featuring LINE characters that could add on to the revenue of LINE Corporation.

Cultural adaptations

It is common to see IM apps changing their model to expand into new markets internationally and to accommodate the different user needs of different regions. WhatsApp removed its subscription fee model as more people around the world began adopting the app, but had no debit or credit card to pay for the prolonged service (WhatsApp blog, 2016). After all, high cost of SMS in many countries could be one explanation to why free IM app penetration is higher in certain countries and comparatively low in the United States, where many people are able to enjoy unlimited SMS messaging plans (App Annie, 2016). Rebranding of WeChat was another huge change Tencent decided upon in order to expand globally. As mentioned before, Weixin and WeChat are regulated differently under different political influence. This could be used to Tencent’s advantage, where it can choose what services to provide to each system depending on the users’ needs.

Chapter 4

Business applications and opportunities through IM apps

We can expect to see IM apps that are popular in the West slowly changing to become platforms similar to Asian-based IM apps. IM apps such as WhatsApp and Facebook Messenger have yet to expand their service line similar to that of WeChat and LINE. However, Facebook Messenger has introduced stickers, and it could mean the start of the change from a basic messaging app to a service platform. Although it is hard to determine if transforming IM apps into a platform would be beneficial and profitable to the Western markets, introducing one service at a time would be one way in which companies can decide which features to keep and which to continue expanding.

Businesses can utilize IM apps that are already becoming an everyday necessity through direct marketing and making online sales more easily accessible through mobile phones. Some IM apps are opening to businesses to advertise more easily. WhatsApp announced that instead of having third-party ads that could be annoying to users, it is looking to enhance communication between businesses and users who are interested in specific businesses and would like to hear from them (WhatsApp blog, 2016). Similarly, LINE and KakaoTalk have Official Accounts and PlusFriend features that allows businesses, organizations, celebrities and brands to have accounts of their own and interact with their followers directly.

The number of people purchasing items via mobile phone online has increased over a year from 2015 to 2016 (Wearesocial, 2015 and 2016). South Korea increased from 37 percent to 43 percent, ranking first for both periods. UAE leaped from 27 percent to 40 percent mobile e-

commerce penetration – 13 percent increase within a year (see Appendix for mobile commerce shoppers 2015 and 2016). Eight out of the top ten countries with the highest mobile social use by country also rank within top ten with the highest mobile e-commerce percentage. This shows a strong relationship between mobile social penetration and mobile e-commerce penetration. East Asia has the highest mobile social network active accounts by number, followed by Southeast Asia, North America, South America and Western Europe (see Appendix). Therefore, in order to advertise to young adults in countries with high mobile social network use, it is advisable to do so through the dominant IM app in that country or region.

Businesses have to be aware that countries differ in telecommunication industry structure, and thus have to research on the target country's government regulation and market structure on business model selection (Mehmood, 2015). According to Malik et al (2013), perceived usefulness, user-friendliness, hedonic aspects of behavior, innovativeness and product involvement are all positive factors that affect consumers' adoption rate of m-commerce. However, since security assurance also play a vital role in m-commerce adoption, firms should focus on reducing the perceived financial risk of consumers first.

Because m-commerce is a subset of e-commerce, it is helpful to determine key strategies to a successful e-commerce. Tang and Wu (2015) suggested five paths to increase e-commerce customer satisfaction and firms' marketing strategies:

1. Constructing a good recommendation system based on big data
2. Establishing a reputable recommended system to reduce perceived risk of consumers and to establish a trust mechanism
3. Optimizing virtual experience and making it popular
4. Improving upon search results

5. Constructing a stable security system

Furthermore, it is important for businesses to come up with a value net approach, shifting away from traditional models (Mehmood, 2015). As the number of service providers and application developers increase, it becomes more difficult for firms to determine one that would be beneficial to them. Therefore, we can expect to see collaboration with companies in the form of agreement in the future (Mehmood, 2015).

Chapter 5

Conclusion

Through the study of three IM apps that are dominant in different regions of the world, it was evident that the growth of MAU depends on the penetration into new markets, besides broadening its service lines. Asia-based IM apps are more likely to have a bigger range of services provided to the users compared to the other IM apps. They started as basic messaging app and became a source of entertainment, and now they are growing to become a part of users' lives by fulfilling everyday needs with online wallet feature. The main source of revenue comes from advertisements, mobile games and sticker sales, with the exception of WhatsApp. Interestingly, WhatsApp has been making a net loss for the past few years, despite having the highest MAU. This is because WhatsApp is not interested in revenue generation as of yet, and its goodwill is valued much higher. Apps have also went through numerous changes, ranging from minor fixes to huge changes as they venture into new markets.

IM apps are growing to provide services beyond basic messaging features. It is becoming a platform of services, targeting users' everyday necessities. The transformation from a basic IM app to a service platform is faster in Asian-based applications compared to other regions of the world, and there is a high possibility that other dominant IM apps will soon catch up to them. It would be beneficial for businesses to know their target country mobile social usage, which IM app is dominant in that country and whether they have business-friendly model that allows businesses to communicate directly to customers and fans. It is highly likely that the next trend in shopping will shift from e-commerce to m-commerce, so firms should come up with a value

net approach, moving away from a traditional business model. Perceived usefulness, user-friendliness, hedonic aspects of behavior, innovativeness, product involvement and security assurance could help increase the adoption rate of m-commerce. Company collaborations are also expected in the future in the form of agreement, along with the increase in the service providers and application developers, thus businesses should be on the constant lookout to make sure they are not losing out in the game.

Appendix

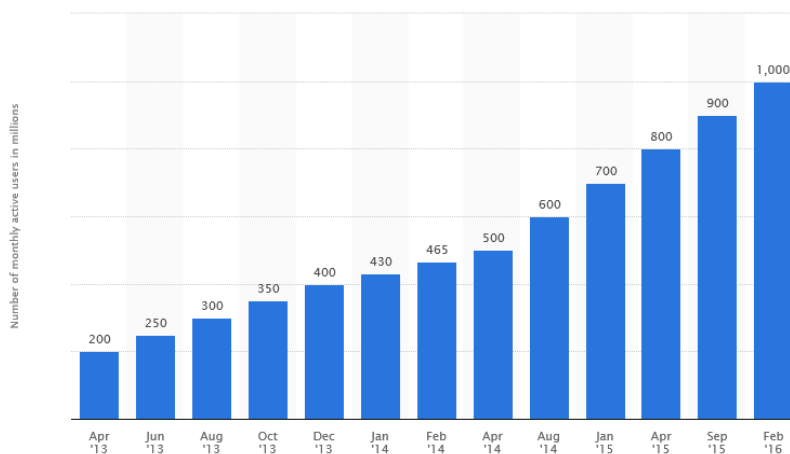


Figure 3: WhatsApp MAU growth (Statista, 2016)

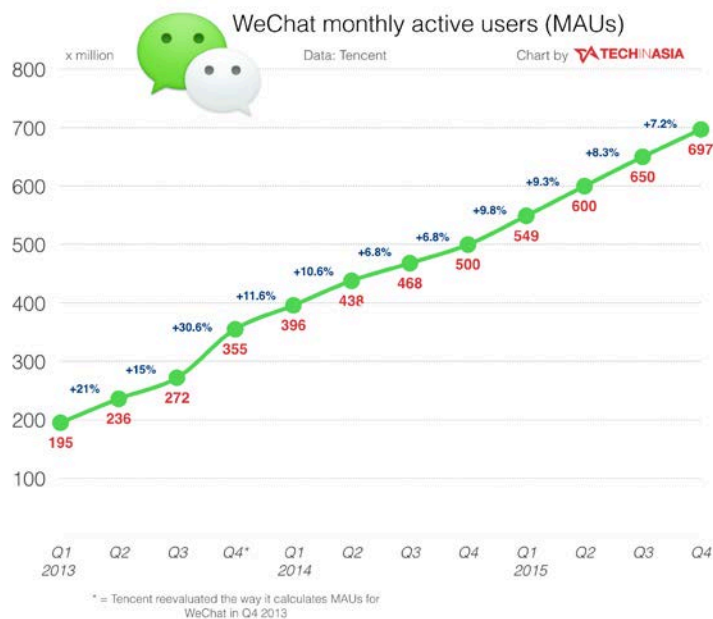
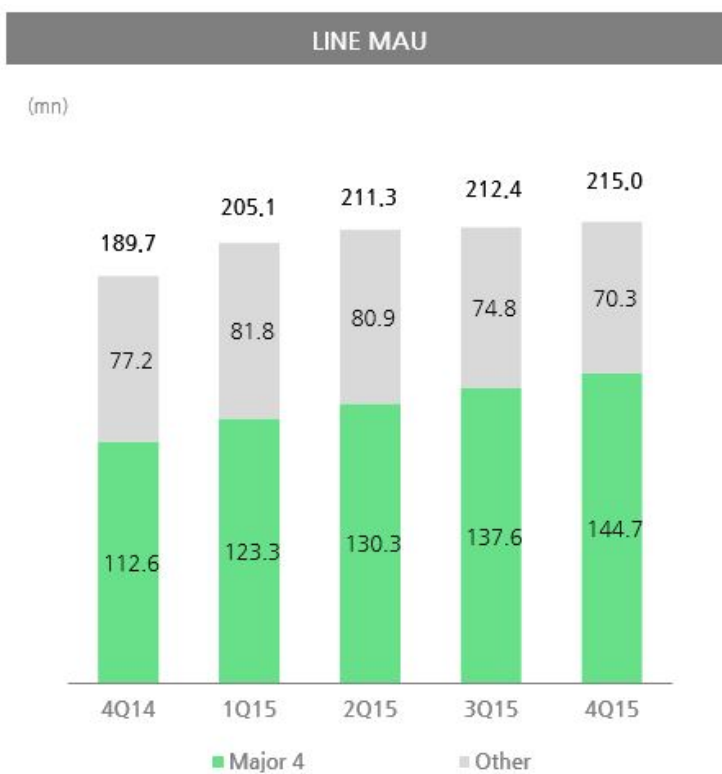


Figure 4: WeChat MAU (Techinasia, 2016)



※ Major 4 includes Japan, Taiwan, Thailand, and Indonesia

Figure 5: LINE MAU growth (Naver, 2016)

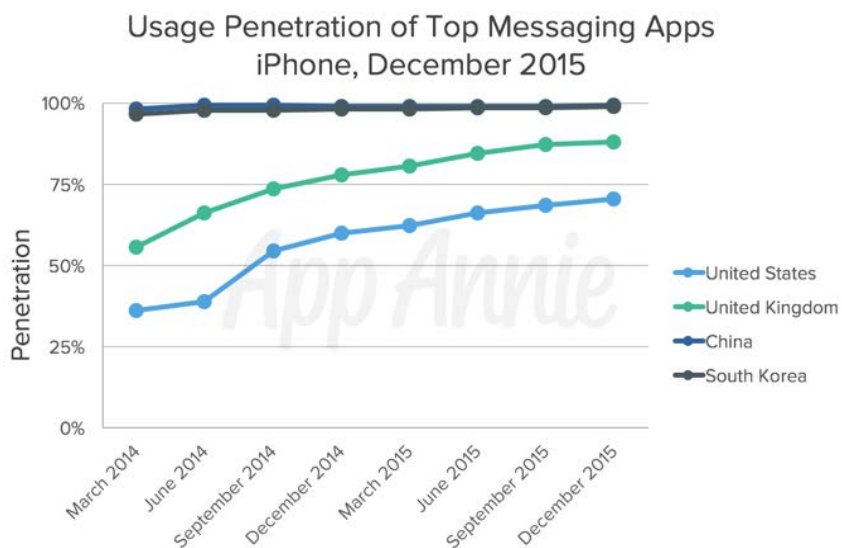


Figure 6: Usage penetration of top iPhone IM apps in December 2015 (AppAnnie, 2016)



Figure 7: Percentage of active mobile-commerce shoppers as of Jan 2016 (Kemp, 2016)



Figure 8: Percentage of mobile commerce shoppers as of Jan 2015 (Kemp, 2015)

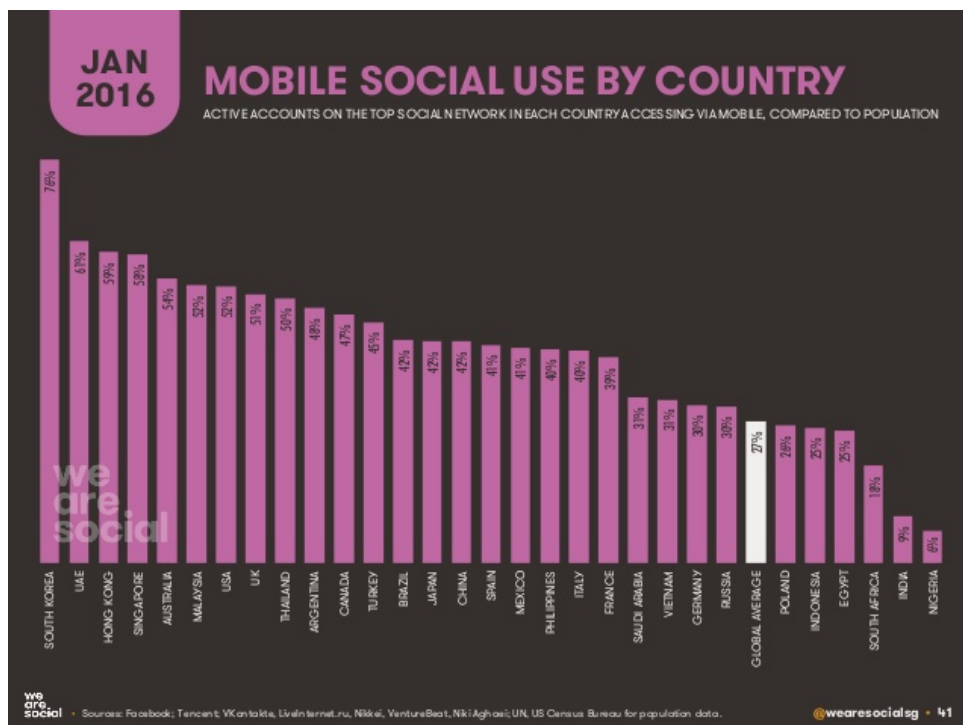


Figure 9: Mobile social use by country as of Jan 2016 (Kemp, 2016)

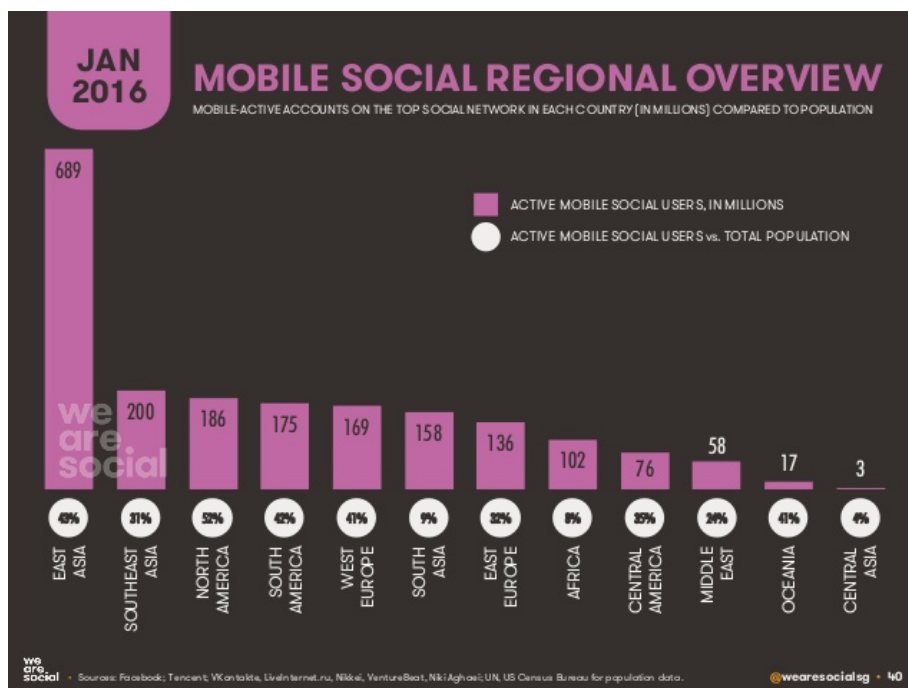


Figure 10: Mobile social regional overview (Kemp, 2016)

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