

CHAPTER 4. DISCUSSION

In this section, the author will describe the research findings obtained from the research. This section will describe m-commerce situation in Indonesia, and quantitative results from the research. The quantitative result will determine whether to reject or to approve the hypothesis stated in the first section.

4.1 M-COMMERCE IN INDONESIA

Indonesia and its more than two-hundred million people population is certainly a promising market for telecommunication industry, and the wide-spread archipelagos and centralised development push people to use mobile phone instead of fixed phone line. PT Telkom Tbk. as the sole state-owned fixed phone line provider is unable to build the needed infrastructure for all regions in Indonesia. As the result, in the end of 2007 there were only 8 millions fixed phone line subscribers recorded in Indonesia [38]. In contrast, within 12 years since its first use, the number of mobile phone subscriber has exceed 80 millions [39] or nearly 40% of population by the end of year 2007. Indonesia placed the third in the number of mobile phone user in Asia, after China with its 550 million users, and India with 229 million users [39].

The development of m-commerce in Indonesia started in 1989 when mobile phone was used in Indonesia for the first time, at that time the networking technology was AMPS (Advanced Mobile Phone System) which still utilised analogue radio frequency, many literatures then referred AMPS technology with the term “1G” (first generation) [40].

Under AMPS technology, voice call was the only available service. AMPS technology discontinued to operate and replaced by digital networking technology such as GSM and CDMA. In Indonesia, GSM has been adopted since 1994 [41].

At that time, PT Satelit Palapa Indonesia (Satelindo, later known as Indosat) was the only service provider, the coverage area were only Jakarta and its neighbouring districts [41]. The existence of GSM network at this year signified Indonesian m-commerce era. Service was no longer limited to voice call, since the introduction of Short Message Service (SMS). A year later, in 1995 PT Telkomsel emerged to serve greater area outside Jakarta. Both Telkomsel and Indosat were state-owned company, later in 1996 PT. Excelcomindo was the first private company that own the license to operate in Indonesia [41]. Currently there are 5 companies that own license to operate under GSM networks, and 6 other companies with CDMA network license. Below is the list.

TABLE 4.1 CDMA OPERATORS IN INDONESIA

No	Company Name	Product Name
1	PT. Bakrie Telecom	Esia
2	PT Telekomunikasi Indonesia	Flexi
3	PT Mobile-8 Telecom	Fren
4	Smart Telecom	Smart
5	Sampoerna Telekom	Ceria

TABLE 4.2 GSM OPERATORS IN INDONESIA

No	Company Name	Product Name
1	PT Indonesian Satellite Corporation	Mentari Matrix IM3
2	PT Telkomsel	simPati KartuAs KartuHalo
3	PT Excelcomindo Pratama	Bebas Jempol Xplor Jimat
4	Hutchison Charoen Pokphand Telecom	3

4.1.1 SERVICES LIST

The well established mobile networking infrastructure in Indonesia also presents high speed data transmission technologies such as GPRS and HSDPA which enable more advanced services to be available. While voice call is still the primary communication service, there are more usable complementary services. Below is the list and brief

explanation of m-commerce services that available in Indonesia. The list only contains services that are available in three mature providers (Indosat, Telkomsel, and Excelcom). The author excluded services from other new emerged provider because at the time when this research conducted, those providers did not enable some services that will be examined.

1. Voice Call

Voice call is the primary services in m-commerce, it allows user to talk with another user. Perhaps the main purpose of having a mobile device is to utilize this service.

2. SMS

SMS or Short Messaging System is a telecommunication protocol that allows message interchanging between mobile devices. A message can only contain short text (160 characters at most).

3. MMS

MMS stands for Multimedia Messaging system. Similar with SMS, MMS allows message interchange, but with more advanced contents like images, audio, and coloured text.

4. Video Call

Video call is a service that allow user to communicate not only with voice, but with real time video. Video call is an icon for the Third Generation telecommunication era which represents networking technology capability to transfer data in a high speed.

5. Email

Since mobile device enables connection to the Internet, communication means such as email is also enabled to be accessed from mobile device. Some email providers like Google, Yahoo and MSN also offers mobile version of their product.

6. Instant Messenger (IM)

Instant messenger works on the same principle as SMS, but IM use Internet as the protocol, beside that IM needs an additional messenger software to operate. IM appears to rival SMS in price.

7. Mobile Banking

This service allows user to perform cashless bank transaction with mobile devices. Everyday transactions such as balance-checking or money transfer are can now be done without physically queuing in the bank or ATM.

8. SMS Credit Reload

It is a service to reload mobile phone credit. To enable this service, user needs to link their bank account with their mobile phone number. Anytime user wants to reload their credit, they simply send an SMS to the service provider containing the credit nominal they want to reload. Service provider will then deduct the balance from user's bank account.

9. Mobile Payment

Mobile payment is a newly introduced service. Similar to SMS credit reload service, it allows user to do transactions with vendors and pay them by four methods below [42]:

- Call a premium-rate calling numbers,
- Charging to the mobile telephone user's bill
- Deducting their calling credit.
- Registration of a credit card or bank account that is linked to user's number.

At the moment, there are only limited numbers of vendors that participate and enable this kind of transaction, nevertheless mobile payment offers convenience and security as it does not deal with physical money.

10. News

News service allows user to have text information sent to their mobile device as an SMS, either by subscription or by demand. News service is classified into finance, entertainment and traffic news, based on the category of information it contains.

11. Local Information

This is one of the examples of context-aware service, since service providers can recognize user's position, user can ask for the information within that vicinity. For example, user can find a list of nearest hotel, café and other public places.

12. Content Download

User can customise their mobile communication experience by downloading content such as games, phone wallpaper, mp3s, and phone theme. Based on the content, this service is divided into Games Download, Graphic Download and Music download.

13. Ring Back Tone

This service allows user to personalise their ring back tone by changing their usual ring back tone to a song of their choice. In Indonesia, this service is widely known as “Nada Sambung Pribadi”

14. Internet Browsing

With the latest network technology capability to connect with the Internet, Mobile Internet browsing is the immediate service that service provider can offer.

4.2 SERVICE CLASSIFICATION

As mentioned in hypothesis, the author would like to compare the popularity between service characteristics (i.e. Synchronous with Asynchronous, or Hedonic with Utilitarian). These 18 services need to be classified into categories based on their characteristic. Below are the criteria of the classification.

1. Typology

The services will be divided into 4 categories based on the purpose of the service. Service can be a means of communication between users; it can also be transactional, information, or entertainment [10]. The explanation of each type already defined in section 2.

2. Communication Characteristics

The services will be divided into two categories. Services with interpersonal (2-ways communication) and impersonal (1-way communication) characteristic will be categorised as Synchronous and Asynchronous services respectively [7].

3. Evaluation of service usage

There exist two kinds of user evaluation in service usage. Service usage or consumption can be cognitively placed on both utilitarian dimension of instrumentality (e.g., how useful or beneficial the object is), and on a hedonic dimension measuring the experience associated with the object (e.g., how pleasant and agreeable those associated feelings are) [43]. Below is the table of the classification result

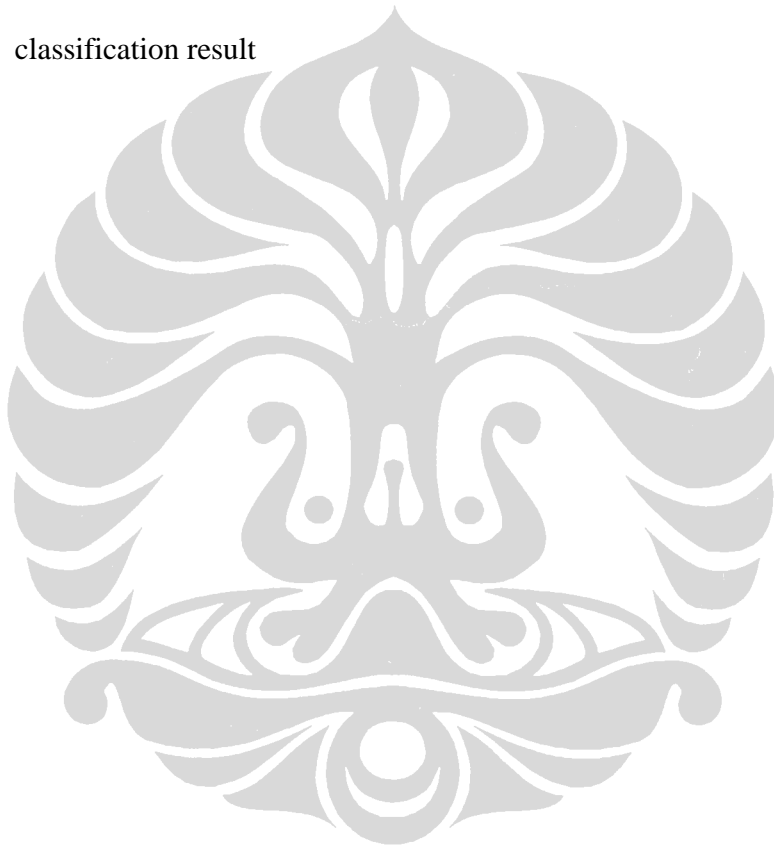


TABLE 4.3 SERVICES CLASSIFICATIONS

No.	M-Commerce Services	Typology	Communication Character	Evaluation of service usage
1	Voice	Communication	Synchronous	Utilitarian/Hedonic
2	SMS	Communication	Asynchronous	Utilitarian/Hedonic
3	MMS	Communication	Asynchronous	Utilitarian/Hedonic
4	Video Call	Communication	Synchronous	Utilitarian/Hedonic
5	Email	Communication	Asynchronous	Utilitarian/Hedonic
6	Instant Messenger	Communication	Synchronous	Utilitarian/Hedonic
7	Mobile Banking	Transactional	Asynchronous	Utilitarian
8	Top Up / Recharge	Transactional	Asynchronous	Utilitarian
9	Mobile Payment	Transactional	Asynchronous	Utilitarian
10	Finance News	Information	Asynchronous	Utilitarian
11	Entertainment News	Information	Asynchronous	Hedonic
12	Traffic News	Information	Asynchronous	Utilitarian
13	Local Information	Information	Asynchronous	Utilitarian
14	Music Download	Entertainment	Asynchronous	Hedonic
15	Graphic Download	Entertainment	Asynchronous	Hedonic
16	Games Download	Entertainment	Asynchronous	Hedonic
17	Ring Back Tone	Entertainment	Asynchronous	Hedonic
18	Browsing Internet	Entertainment	Synchronous	Hedonic

4.3 HOFSTEDE DIMENSIONS IN INDONESIA

Next, the relation between cultural contexts and the adoption of m-commerce need to be observed, or in other word, the author would like to see how far culture influence users to use m-commerce services and how does culture shape the adoption of such services. To do so, Hofstede's cultural dimensions are used to describe Indonesian cultural profile. Each of these cultural dimensions will have a different role and impact in shaping the adoption of m-commerce in Indonesia.

Hofstede had previously measured the cultural condition in Indonesia in his work, which presented in table below. Each dimension is measured with 1 to 100 scales.

TABLE 4.4 HOFSTEDE'S DIMENSIONS INDEX OF INDONESIA

Country	Power Distance (PDI)	Individualism (IDV)	Masculinity (MAS)	Uncertainty Avoidance (UAI)
Indonesia	78	14	46	48

4.3.1 POWER DISTANCE

In Power Distance dimension, Indonesia scored 78. It indicates that in Indonesia, there is a far distance between those who have high power to those who have the least power in the society. Power refers to the level of wealth and influence that a person has. Indonesia exhibits high level of social inequality. This condition is not necessarily forced in the

population; rather it is accepted by the society. The average Power Distance for the greater Asian countries is 71[23].

In high power distance culture like Indonesia, there is likely a condition where those in authority openly demonstrate their rank, and wealth symbols like house or cars are being exposed. In a company, there will be tall hierarchies in organizations resulting in large salary and status differences. Subordinates are not given important work and expect clear guidance from its manager or supervisor. And subordinates are expected to take the blame for things that are going wrong.

Related to m-commerce adoption, this acceptance of one's status may translate into: individuals in high power distance cultures being more relaxed and fun-loving than their low power distance counterparts. This in turn may imply a greater demand for hedonic services in high power distance societies.

4.3.2 UNCERTAINTY AVOIDANCE

The second highest Hofstede ranking for Indonesia is Uncertainty Avoidance (UAI) at 48. Greater Asian average is 58, and a world average of 64. This index reflect a more moderated influence of this dimension within the Indonesian society, therefore significant effect of uncertainty avoidance toward the adoption of m-commerce in Indonesia can not be shown.

Generally, a high Uncertainty Avoidance (UAI) indicates the society's low level of tolerance for uncertainty. In an effort to minimize or reduce this level of uncertainty,

strict rules, laws, policies, and regulations are adopted and implemented. The ultimate goal of this population is to control everything in order to eliminate or avoid the unexpected situation. As a result of high Uncertainty Avoidance characteristic, the society does not readily accept change and is very risk adverse.

4.3.3 MASCULINITY / FEMININITY

The third highest Hofstede ranking for Indonesia is Masculinity, with score 46. It reflects that Indonesia exhibits moderate distribution of gender role in the society. Indonesia exhibit fair amount of traditional assignment, where male symbolize assertiveness, competition, and toughness. This distinction to female roles is still maintained, however the traditional distinction is sometimes collapsed and roles are often substituted between genders.

4.3.4 INDIVIDUALISM / COLLECTIVISM

Indonesia has one of the lowest world rankings for Individualism with score 14, compared to the greater Asian rank of 23, and world rank of 43. The low score on this dimension indicates that the Indonesian society is highly Collectivist as compared to Individualist. This collectivist culture manifested in a close long-term commitment to the group like family or extended family. Loyalty in a collectivist culture is principal, and over-rides most other societal rules and regulations. The society fosters strong relationships where everyone takes responsibility for fellow members of their group. In

Indonesia it is common for people to create groups based on similarity of beliefs, views, and ethnicity.

Related to m-commerce adoption, characteristic in collectivist cultures can be interpreted that this culture has an enhanced reliance on personal recommendation as an influencer of consumer behaviour. The strong bonds between people in collectivist cultures and the high degree of dependence between them may imply that collectivism is associated with a desire for interpersonal, synchronous services rather than impersonal or asynchronous services.

From the explanation about each cultural dimensional above, intuitively it can be concluded that Indonesian high Power Distance and Collectivist culture will bring the biggest influence toward the adoption of m-commerce, however practical evidences are needed to prove this opinion, the next subsection will explain the result from the quantitative research.

4.4 RESEARCH REVIEW

In this subsection the author will review the quantitative research that has been taken previously.

4.4.1 PILOT PROJECT

At this step author has already created questions set needed to justify the hypothesis, it includes the questions to show demographic profile of user, behavioral tendencies of user, influencing factors, and service popularity in the market. The author decided to take the pilot project to test the validity of the questions set.

The pilot project was taken in 18 April 2008. Author gathered 5 of his colleagues to form a group, then the author asked the group to complete the questions set. While the group were filling the question set, the author asked whether any ambiguity or difficulties occurred. The author took notes on the points that should be corrected from the question set. By the end of pilot project, the author has already possessed a solution to increase the question clarity as a result from discussion with the group. The correction then produced the questionnaire that was ready to be distributed.

4.4.2 QUESTIONNAIRE DISTRIBUTION

The questionnaire was distributed from April to May 2008. The questionnaire distributed in University of Indonesia, Depok. From 140 questionnaires that were distributed only 118 that can be processed, 10 are missing, and the other 12 were defective.

4.5 RESEARCH FINDINGS

After the questionnaire is collected, the next step is data summarizing. As it has stated earlier, the author will utilise SPSS version 15.0 as the statistic tools to do the data summarizing, and later, to perform statistic test. Below are the explanations of the research findings.

4.5.1 SERVICES ADOPTION IN INDONESIA

Below is the table that represent adoption rate for each service.

TABLE 4.5 INDONESIAN SERVICES ADOPTION RATE

Typology	Services	Adoption Rate (%)
Communication Services	Voice Call	87
	SMS	96
	MMS	42
	Video Call	33
	Email	48
	Instant Messenger	56
Transaction Services	Mobile Banking	35
	SMS Credit Recharge	53
	Mobile Payment	19
Information Services	Finance News	19
	Entertainment News	43
	Traffic News	19
	Local Information	24
Entertainment Services	Download Music	27
	Dial Tone (NSP)	38
	Download Games	26
	Download Graphic	25
	Browsing Internet	58

From the data summarization, the percentage of population that has been using a particular service is able to be found. This percentage can be obtained by count how many users that complete the “frequency” question related to that particular service.

From the table above, SMS is found to be the most adopted service by the user (96%), followed by voice call with 87 %. These numbers represent quite straightforward fact that SMS and Voice Call are the main communication means that users typically utilise from mobile devices. The fact that voice call adoption is lower than SMS adoption is perhaps due to the pricing structure from Indonesian operators that put a SMS cost lower than a phone call.

The least adopted services are Mobile Payment, Finance News and Traffic News, with only 19% adoption among population. For Mobile payment, this is mostly due to the fact that traditional transaction with cash or card is still the preferable way. Mobile payment is a newly introduced service, where providers still need time to socialise it. In addition, up until now there are only few vendors that accept such transactions. Security issues also may be the main consideration that hinders people to use this service. For Finance and Traffic news, the adoption can be described by examining the user profile. The author assumes that Finance and Traffic News are not the main interests for students.

In Information Services section, entertainment news is the most adopted service. Once again, this phenomenon can be described by looking at the user profile which mostly students, entertainment news such as cinema schedule or horoscope are quite popular features for this market segment [46].

In Entertainment Services section internet browsing is the most adopted service (58%). Internet browsing adoption is being promoted because service providers are now applying affordable price for internet connection through GPRS [46]. As a result, in Communication service section “Instant Messenger” is being the most used service after

SMS and Voice call. In addition, Ring Back Tone service is also popular in Indonesia, [44] reported that by February 2008, Telkomsel alone recorded 900.000 users subscribed the service. In fact, some new-comer bands and singers get higher revenue from royalty they get from this service instead from their album selling [45].

4.5.2 NUMBER OF MOBILE SERVICES ADOPTED

Another data that can be obtained from the questionnaire is the average number of service adopted by a user. This measurement is useful to find the distribution of service usage. The histogram below shows that in Indonesia, near half of the population use only 1 to 5 m-commerce services. From the previous table it can be noticed that the top 5 services that being adopted are: “SMS”, “Voice Call”, “Internet Browsing”, “Instant Messenger”, and “SMS credit reload”.

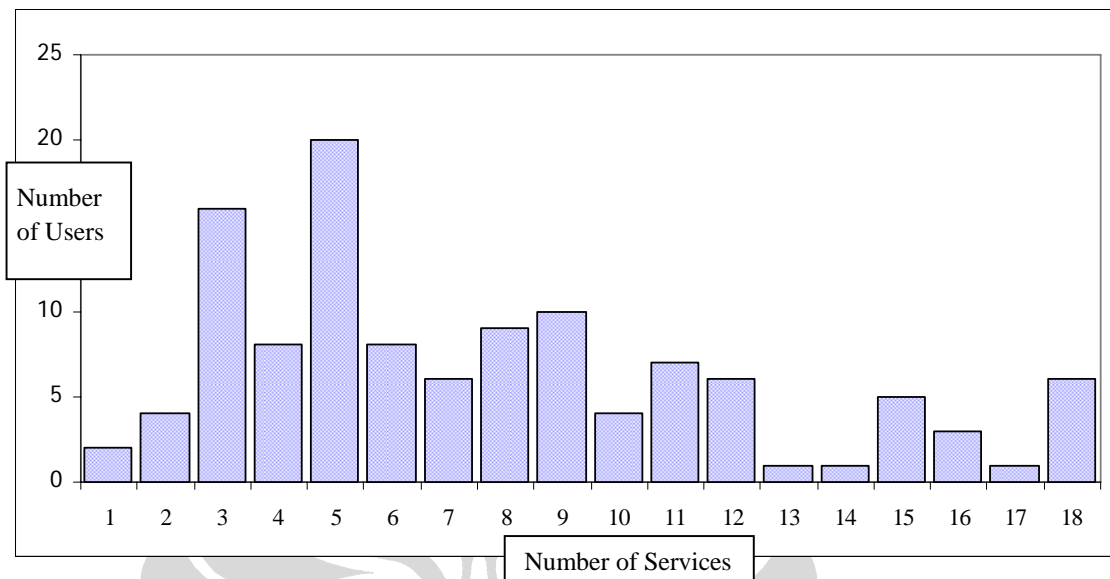


FIGURE 4.1 NUMBER OF MOBILE SERVICES ADOPTED IN INDONESIA

While the rests of population are eager to use wider variation of m-commerce service, it then can be interpreted that Indonesian consumers have good awareness of new technology applied in new services.

Notice that there is a peculiar condition in the number of users that have used all the 18 m-commerce services because it significantly different from the number of users that have used 17 services. It is possibly due to error from questionnaire filling process, because people tend to complete all the questions from every service although they never used it previously.

4.5.3 DEMOGRAPHIC PROFILE OF SAMPLES

The table below shows the demographic profile of m-commerce services user.

TABLE 4.6 DEMOGRAPHIC PROFILE OF USER

Category	Variable	Frequency	Percentage
Gender	Male	68	57.6
	Female	47	39.8
Age	19-23	112	94.9
	24-30	0	0
	>30	0	0
Occupation	Student	109	92.4
	Working	3	2.5
	Not Working	2	1.7
Last Education	None	1	0.8
	SD	0	0
	SMP	0	0
	SMA	90	76.3
	Diploma	1	0.8
	Graduate	23	19.5

Because the author has already defined the target of respondents, the demographic result shows a profile that is uniform in several aspects. For example, since the respondents are the University of Indonesia students, this research would not encounter user with elementary school (SD) as it last education. It is also very unusual to found an undergraduate student with an age above 30 years old.

4.5.4 BEHAVIOURAL PROFILE OF SAMPLE

One of the variables that this research interested is the user behaviour toward mobile device and m-commerce service. The table below shows the behavioural profile of respondents.

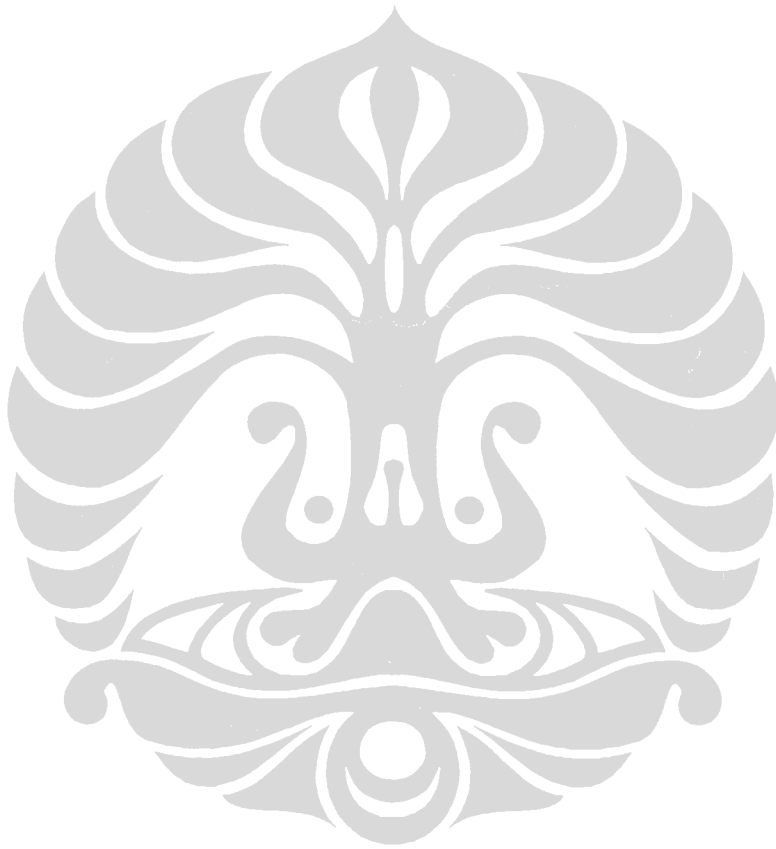


TABLE 4.7 BEHAVIOURAL PROFILE OF SAMPLE

Question	Answers	Frequency	Percentage
Number of Mobile Phones held currently	1	43	36.4
	2	67	56.8
	3	4	3.4
	>=4	1	0.8
Number of service providers used currently	1	37	31.4
	2	65	55.1
	3	10	8.5
	>=4	3	2.5
Length of current mobile phone usage	< 1 year	0	0
	1-2 years	0	0
	2-3 years	6	5.1
	>3 years	109	92.4
Changed service provider in the past 12 months	No	81	68.6
	Yes	33	28.0

The table shows that it is a common to have one or two active mobile devices. The advancement in technology dramatically pushes the mobile device price to decrease. Mobile device is no longer a luxury good, rather people see it as a need. In Indonesia, having two mobile devices is commonly practiced since the introduction of service

providers that operate in CDMA network in 2003 [46], Telkom was the first operator that operated nation-wide CDMA network. These operators offer very low price for Voice Call and SMS, and claimed to be as cheap as fixed phone line. Up until 2007, there are more than 10 millions CDMA users in Indonesia [46].

Tariff war between GSM operators also plays important role in pushing people to use more than one mobile device. Many operators have strategy to increase their customer by lowering the price for intra-operator voice call or SMS. Align with this fact, in the second part of the question it can be observed that the numbers of service provider that is currently used by the users are proportional with the number of mobile device they use.

The maturity of Indonesian consumer can be seen in the length of mobile device usage. Most users in this research (92%) have been using mobile device for more than three years which indicated that these users are familiar with such technology. User loyalty to a service provider can be examined in the last part, where most users have not changed their service provider in the last 12 months. While the other 28% of users are more open to new operators. Service provider migration also shows that these users are not afraid to change their mobile phone number to get better service quality or lower prices in return.

4.5.5 HYPOTHESIS TESTING

At this point, this research has already gathered sufficient data to do the hypothesis testing. As previously explained, the author will incorporate Wilcoxon Signed-Rank test as the statistic test.

4.5.5.1 HYPOTHESIS 1

Synchronous services will be more popular than asynchronous services in Indonesian collectivist culture.

Justification:

The table below shows “Popularity” mean for each service. From the “Category Mean” column, it can be seen that Synchronous services are more popular than Asynchronous services.

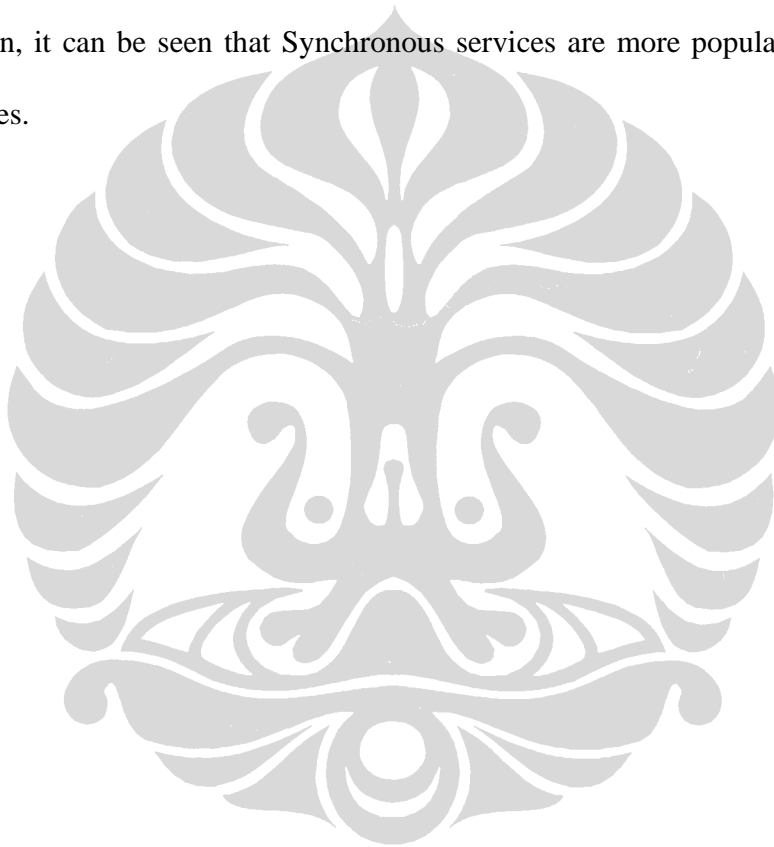


TABLE 4.8 SYNCHRONOUS AND ASYNCHRONOUS SERVICES POPULARITY MEAN

Service Category	Service Name	Mean	Category Mean
1. Synchronous	Voice Call	3.44	2.95
	Video Call	1.93	
	Instant Messenger	3.14	
	Browsing Internet	3.29	
2. Asynchronous	SMS	4.15	2.34
	MMS	1.98	
	Email	2.98	
	Mobile Banking	2.28	
	Credit Recharge	3.03	
	Mobile Payment	1.81	
	Finance News	2.08	
	Entertainment News	2.23	
	Traffic News	1.96	
	Local Information	1.98	
	Download Music	1.81	
	Dial Tone (NSP)	2.65	
	Download Games	1.78	
	Download Graphic	2.06	

TABLE 4.9 WILCOXON SIGNED-RANK TEST ON SYNCHRONOUS AND ASYNCHRONOUS SERVICES

		Ranks		
		N	Mean Rank	Sum of Ranks
Asynchronous - Synchronous	Negative Ranks	100 ^a	65.13	6512.50
	Positive Ranks	17 ^b	22.97	390.50
	Ties	1 ^c		
	Total	118		

a. Asynchronous < Synchronous

b. Asynchronous > Synchronous

c. Asynchronous = Synchronous

Test Statistics ^b	
	Asynchronous - Synchronous
Z	-8.326 ^a
Asymp. Sig. (2-tailed)	.000

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

Looking at the result table above, from 118 samples there are 100 people who weigh Synchronous services to be more popular than Asynchronous service, intuitively it can be concluded that Synchronous service will be more popular than Asynchronous service.

The Wilcoxon Signed-rank test indicates that there is significant difference in popularity between Synchronous services and Asynchronous service, $Z = -8.326$, $W+ = .000$. That is, the average Synchronous service rank ($M = 65.13$) is significantly different from that of Asynchronous service ($M = 22.97$).

Hence, it is proved that Synchronous service is more popular than Asynchronous service in Indonesian collectivist culture.

4.5.5.2 HYPOTHESIS 2

Hedonic services will be more popular than utilitarian services in Indonesian high power distance culture.

Justification:

The table below shows “Popularity” mean for each service. From the “Category Mean” column it can be seen that Hedonic services are more popular than Utilitarian services.

TABLE 4.10 HEDONIC AND UTILITARIAN SERVICES POPULARITY MEAN

Service Category	Service Name	Mean	Category Mean
1. Hedonic	Download Music	2.08	2.36
	Dial Tone (NSP)	2.23	
	Download Games	1.96	
	Download Graphic	1.98	
	Browsing Internet	3.29	
	Entertainment New	2.65	
2. Utilitarian	Mobile Banking	2.28	2.13
	Credit Recharge	3.03	
	Finance News	1.81	
	Mobile Payment	1.81	
	Traffic News	1.78	
	Local Information	2.06	

The table below shows the Wilcoxon Signed-rank test result for these two categories of service.

TABLE 4.11 WILCOXON SIGNED-RANK TEST ON HEDONIC AND UTILITARIAN SERVICES

		Ranks		
		N	Mean Rank	Sum of Ranks
Utilitarian - Hedonic	Negative Ranks	68 ^a	60.58	4119.50
	Positive Ranks	38 ^b	40.83	1551.50
	Ties	12 ^c		
	Total	118		

a. Utilitarian < Hedonic

b. Utilitarian > Hedonic

c. Utilitarian = Hedonic

Test Statistics^b

	Utilitarian - Hedonic
Z	-4.048 ^a
Asymp. Sig. (2-tailed)	.000

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

Parallel with the first hypothesis, according to the table 4.10 above, from 118 samples, 68 people weigh Hedonic services to be more popular than Utilitarian service, intuitively it can be said that Hedonic service will be more popular than Utilitarian service.

The Wilcoxon Signed-rank test indicates that there is significant difference in popularity between Hedonic services and Utilitarian service, $Z = -4.048$, $W+ = .000$. That is, the average Hedonic service rank ($M = 60.58$) is significantly different from that of Utilitarian service ($M = 40.83$). Hence, it is concluded that Hedonic service is more popular than Utilitarian service in Indonesian high power distance culture.

4.5.5.3 HYPOTHESIS 3

Word of mouth recommendation will be the factor that mostly pushes user to use m-commerce service in Indonesian collectivist culture.

To prove that family recommendation is the most influencing factor to use m-commerce services, the author compares the user response to “Family Recommendation” factor with the user response to the factors that most likely have the best response in the questionnaire. To see the comparison between factors, the author created descriptive statistic for all the factors.

TABLE 4.12 FINDINGS ON INFLUENCING FACTORS

Influencing Factors	Mean	Std. Deviation
Discount	3.36	1.17
Free trial	2.91	1.24
Low Cost	4.02	0.98
Incentive	3.28	1.14
Family Recommendation	2.93	1.20
Demonstration	2.44	1.00
Lifestyle Enhanced	2.97	1.18

From the table above “Low Cost” factor is likely to be the most influencing factors, therefore to prove hypothesis 3, the author performs the Wilcoxon Sign-ranked Test to “Family Recommendation” and “Low Cost” factors. Below is the result.

TABLE 4.13 WILCOXON SIGNED-RANK TEST ON RECOMMENDATION AND LOW COST FACTOR

		Ranks		
		N	Mean Rank	Sum of Ranks
LowCost - Reccommendation	Negative Ranks	18 ^a	41.50	747.00
	Positive Ranks	76 ^b	48.92	3718.00
	Ties	19 ^c		
	Total	113		

a. LowCost < Reccommendation

b. LowCost > Reccommendation

c. LowCost = Reccommendation

Test Statistics ^b	
	LowCost - Reccommen dation
Z	-5.698 ^a
Asymp. Sig. (2-tailed)	.000

a. Based on negative ranks.

b. Wilcoxon Signed Ranks Test

The Wilcoxon Signed-rank test indicates that there is significant difference in “Low Cost” factor and “Family Recommendation” factor ($Z = -5.698$, $W_+ = .000$). That is, “Low Cost” mean rank ($M = 41.50$) is significantly different from that of “Family Recommendation” mean rank ($M = 48.92$).

Hence, this research rejects the hypothesis that “Family Recommendation” is the strongest influencer in Indonesian collectivist culture.

4.5.5.4 HYPOTHESIS 4

Indonesian collectivist culture is a price sensitive culture.

To do the comparison, the author sums the three factors in promotional factors category to be compared with those in price sensitive factors, and here is the result.

TABLE 4.14 WILCOXON SIGNED-RANK TEST ON PROMOTIONAL AND PRICE SENSITIVE FACTORS

		Ranks		
		N	Mean Rank	Sum of Ranks
Promotional - PriceSensitive	Negative Ranks	85 ^a	59.04	5018.50
	Positive Ranks	29 ^b	52.98	1536.50
	Ties	4 ^c		
	Total	118		

a. Promotional < PriceSensitive

b. Promotional > PriceSensitive

c. Promotional = PriceSensitive

Test Statistics^b

	Promotional - PriceSensitive
Z	-4.925 ^a
Asymp. Sig. (2-tailed)	.000

a. Based on positive ranks.

b. Wilcoxon Signed Ranks Test

The Wilcoxon Signed-rank test indicates that there is significant difference in the mean between “Price Sensitive” factors and “Promotional Factors” ($Z = -4.925$, $W+ = .000$) That is, the average “Price Sensitive” rank ($M = 59.04$) is significantly different from that of “Promotional Factors” ($M = 52.98$). Since the average rank of factors in price sensitive category is higher than the promotional factors, it can be proved that Sensitivity of price will be higher in Indonesian collectivist culture.