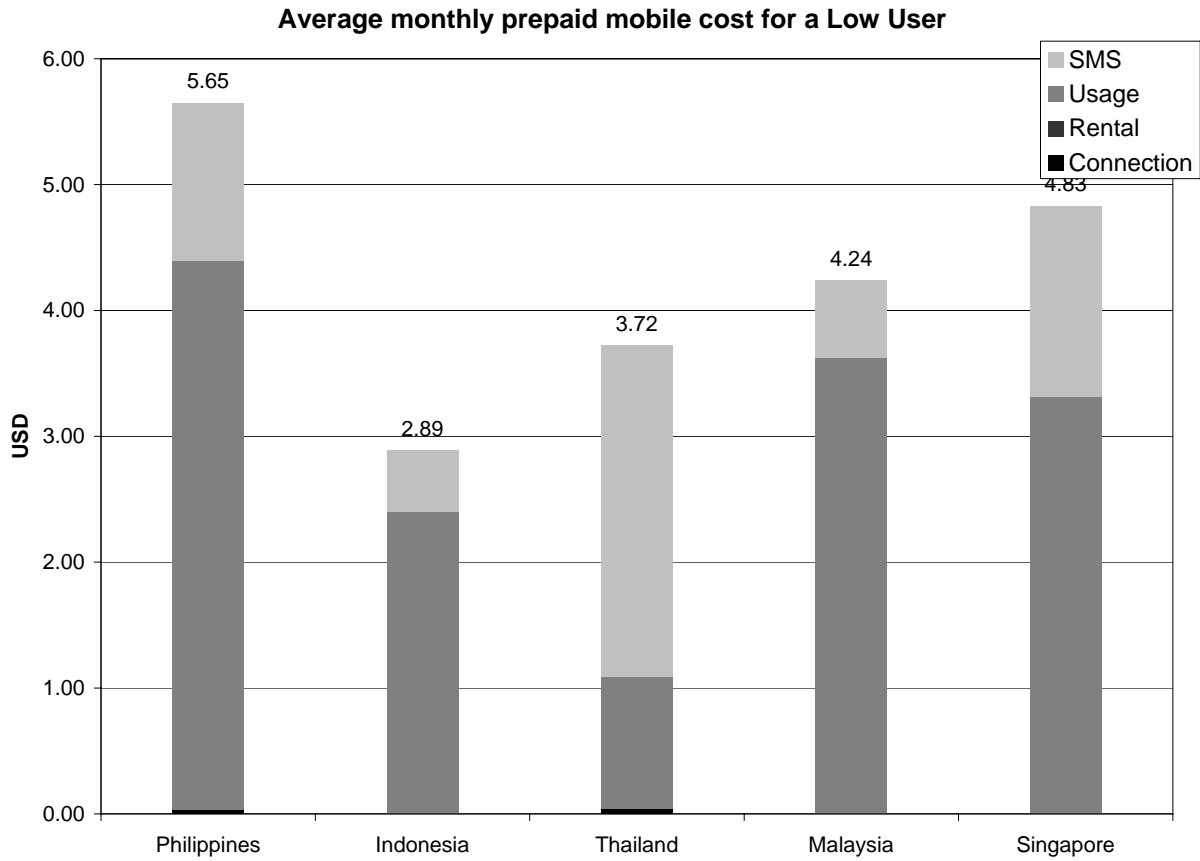
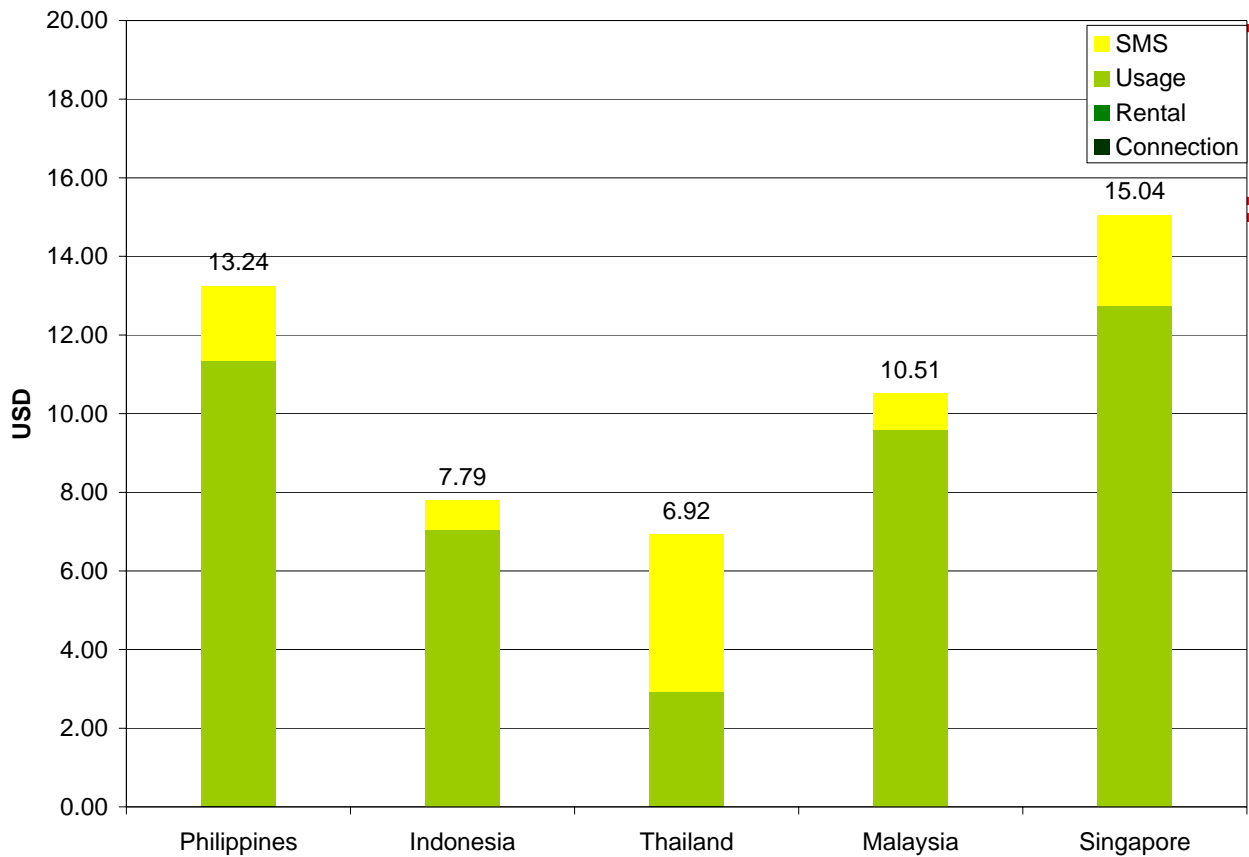


October 2008

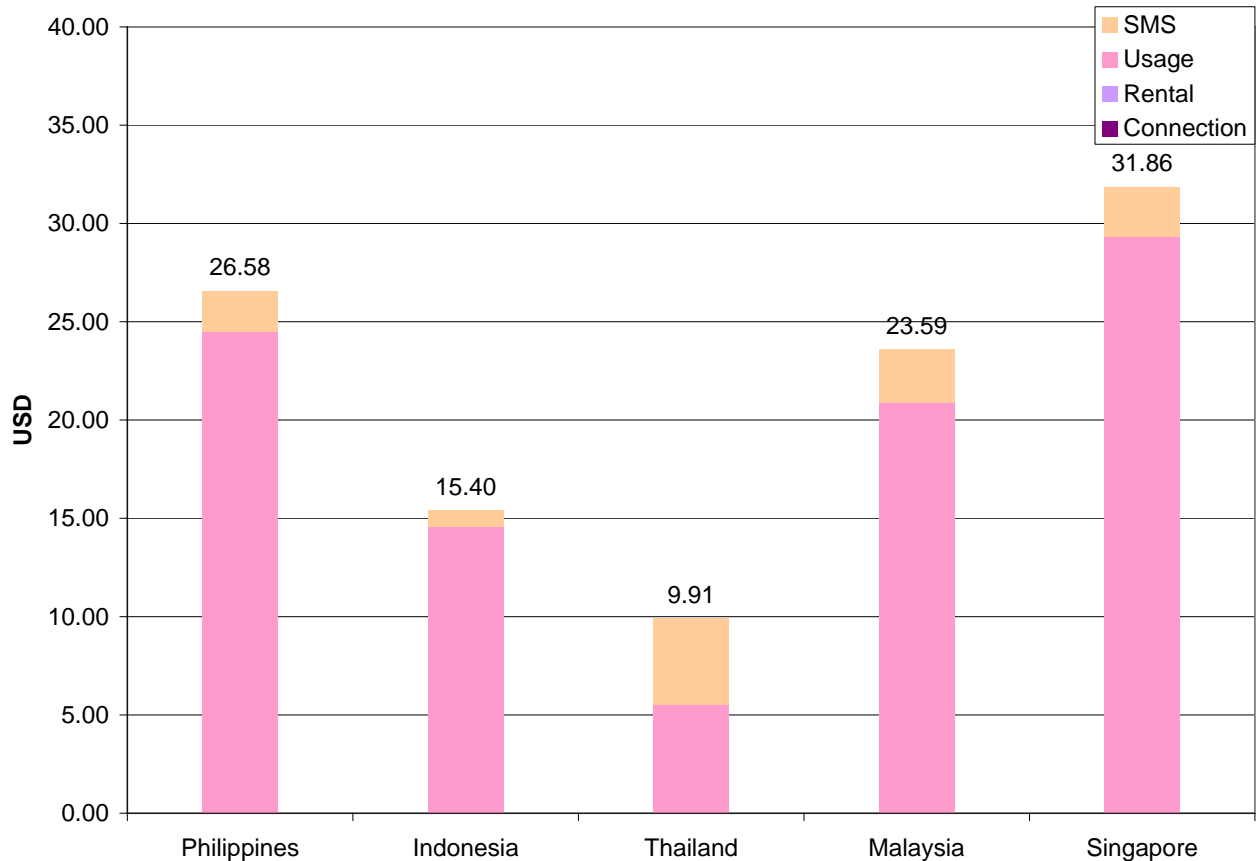
Mobile price baskets (USD)



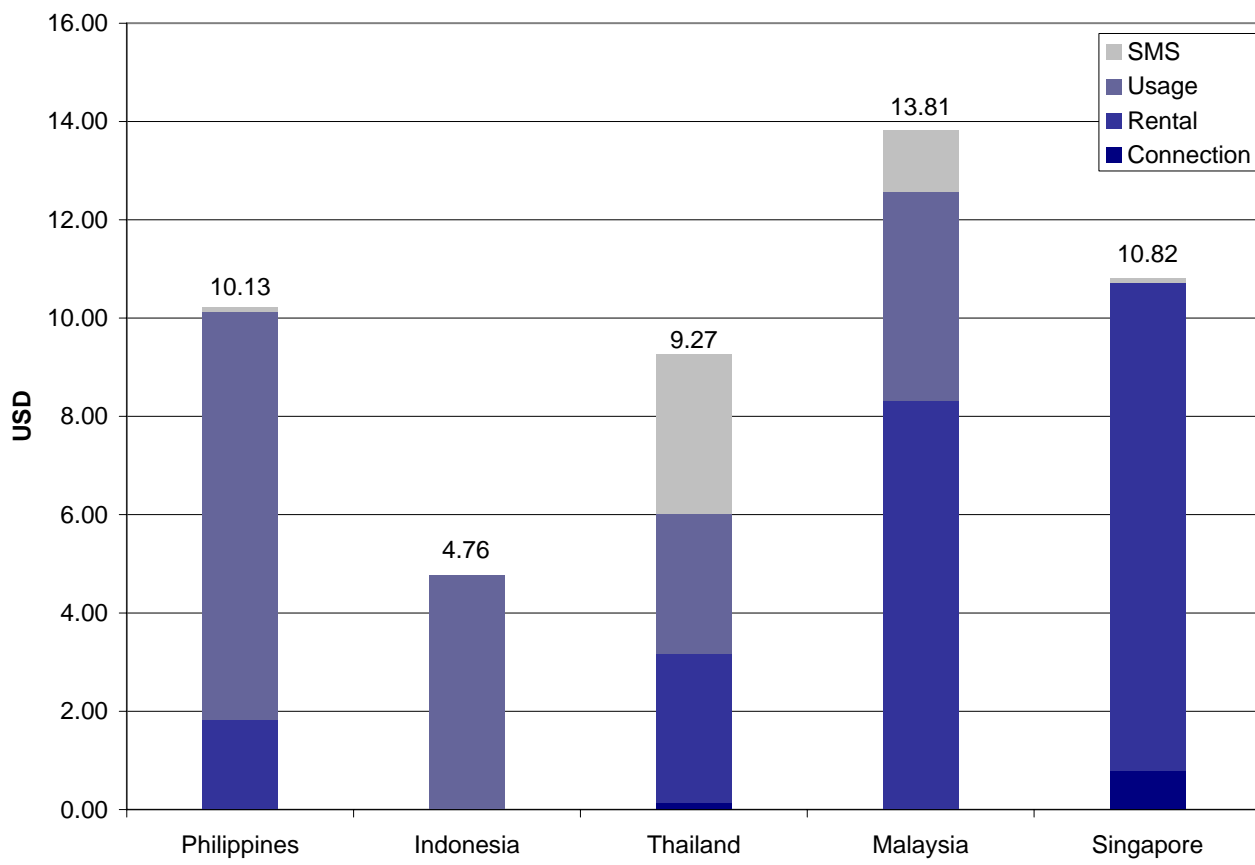
Average monthly prepaid mobile cost for a Medium User



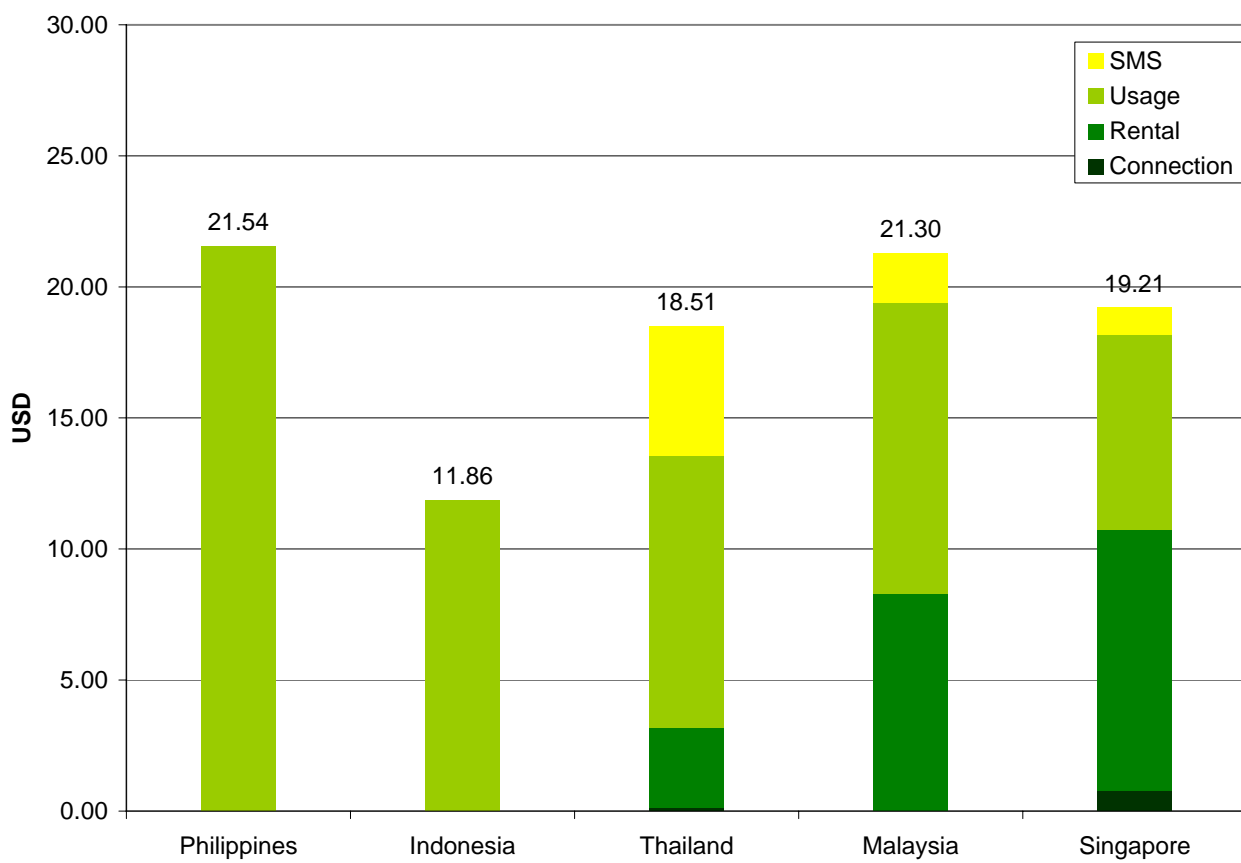
Average monthly prepaid mobile cost for a High User



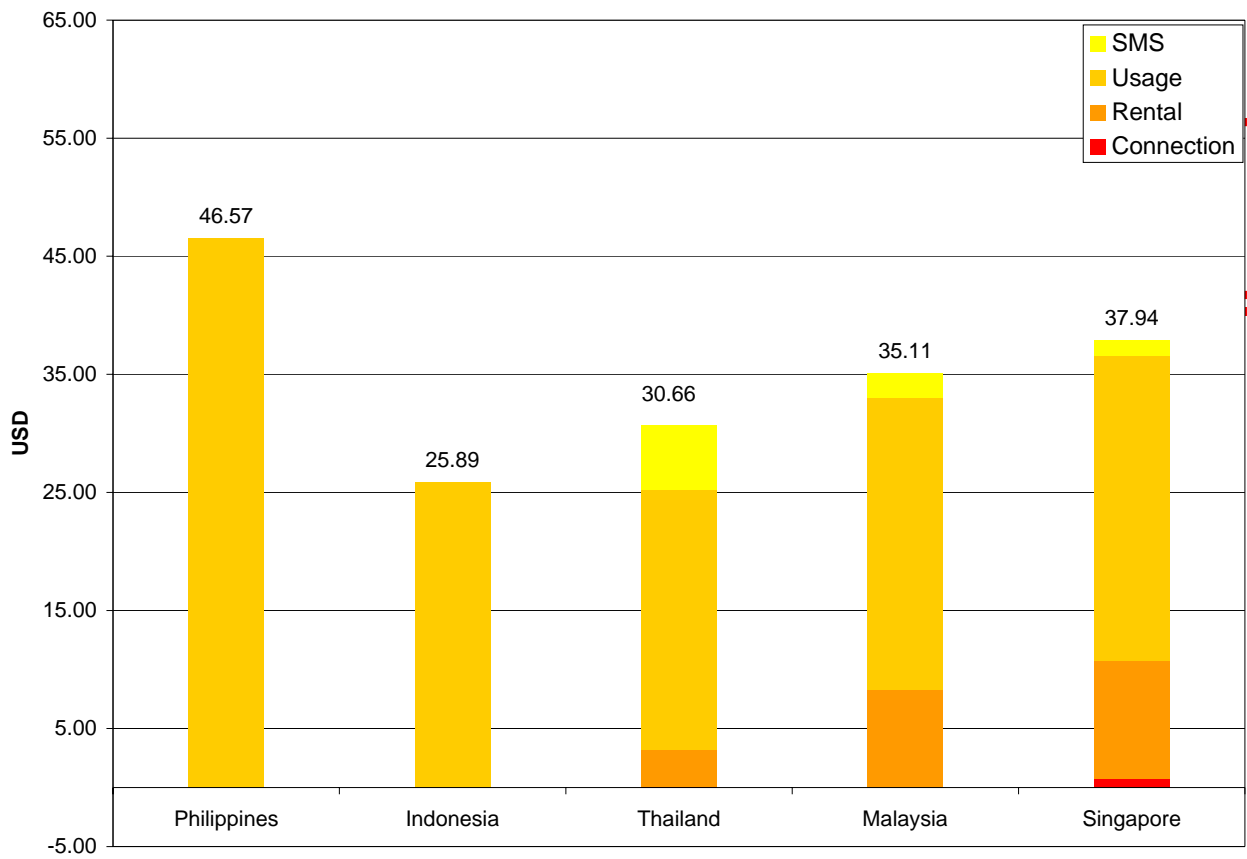
Average monthly postpaid mobile cost for a Low User



Average monthly postpaid mobile cost for a Medium User

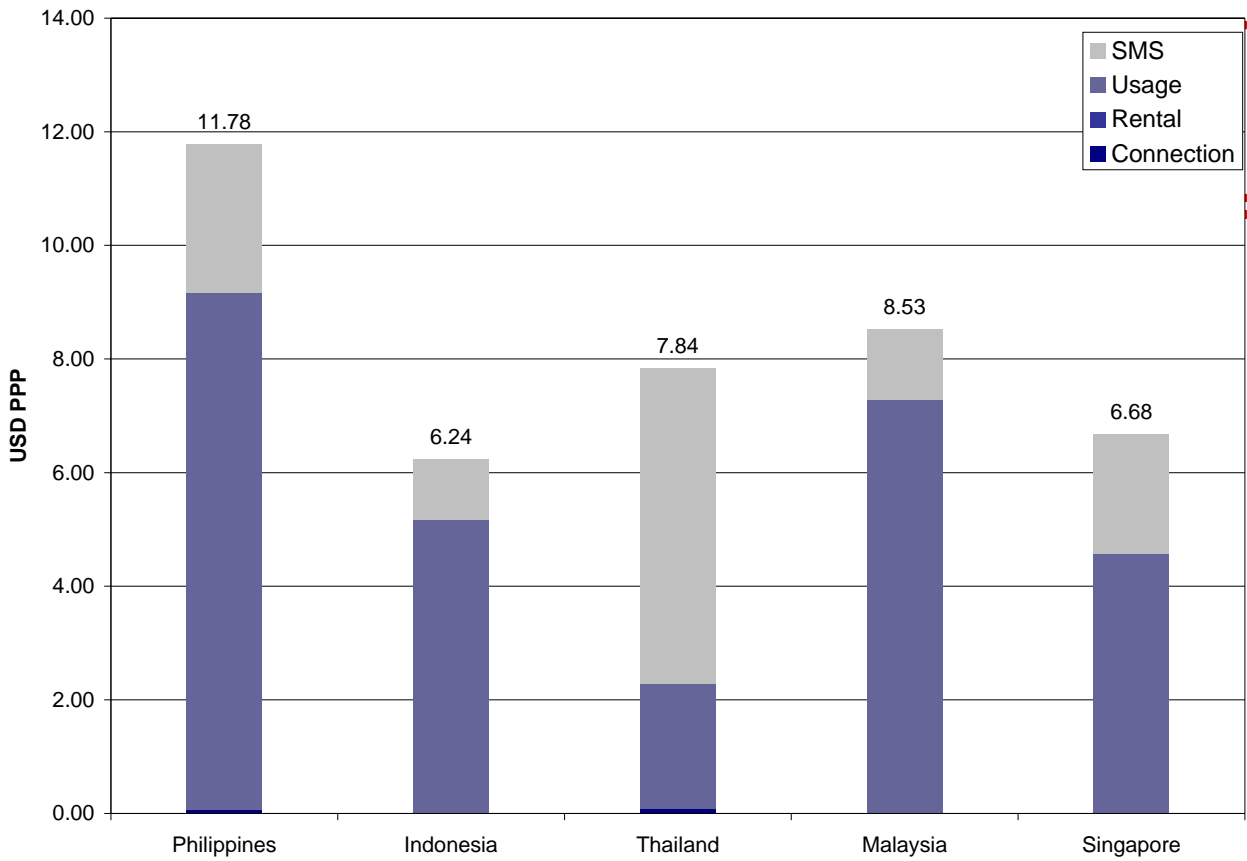


Average monthly postpaid mobile cost for a High User

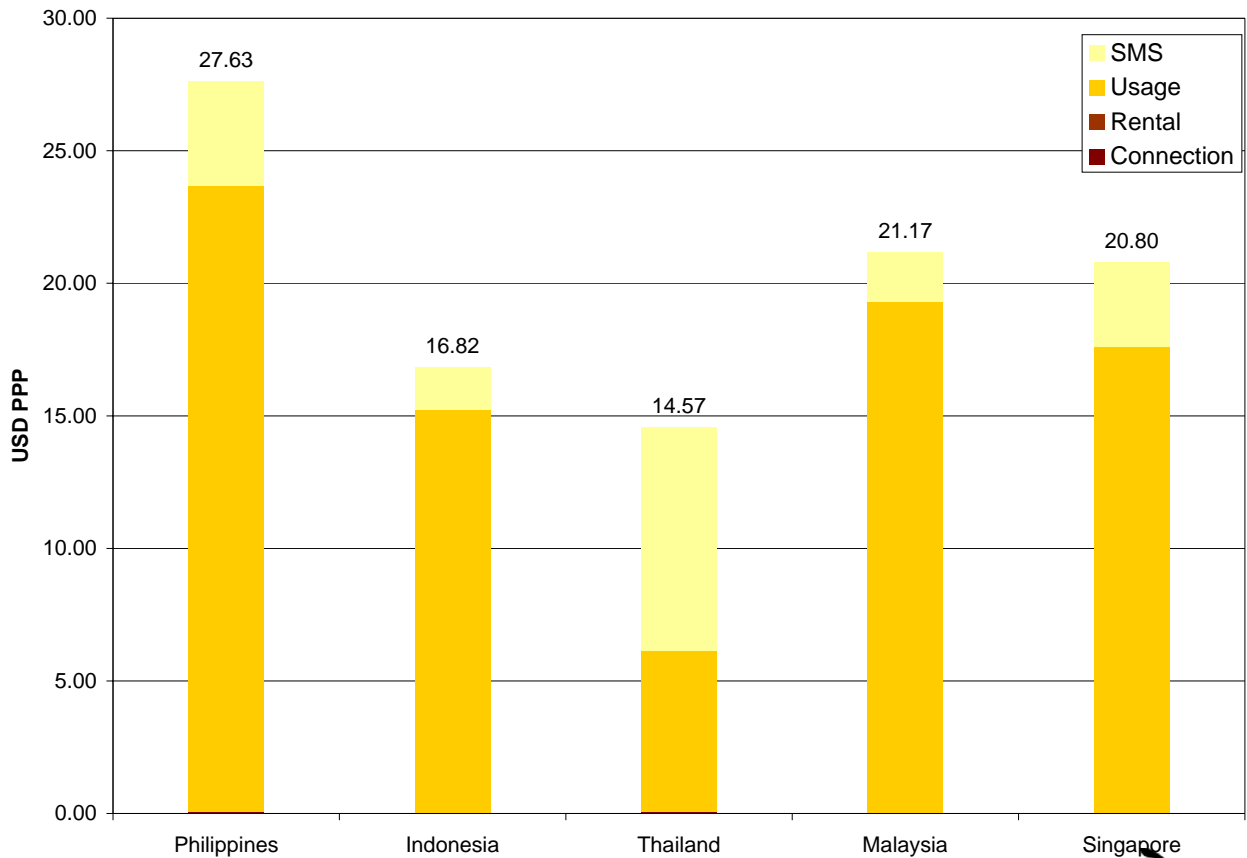


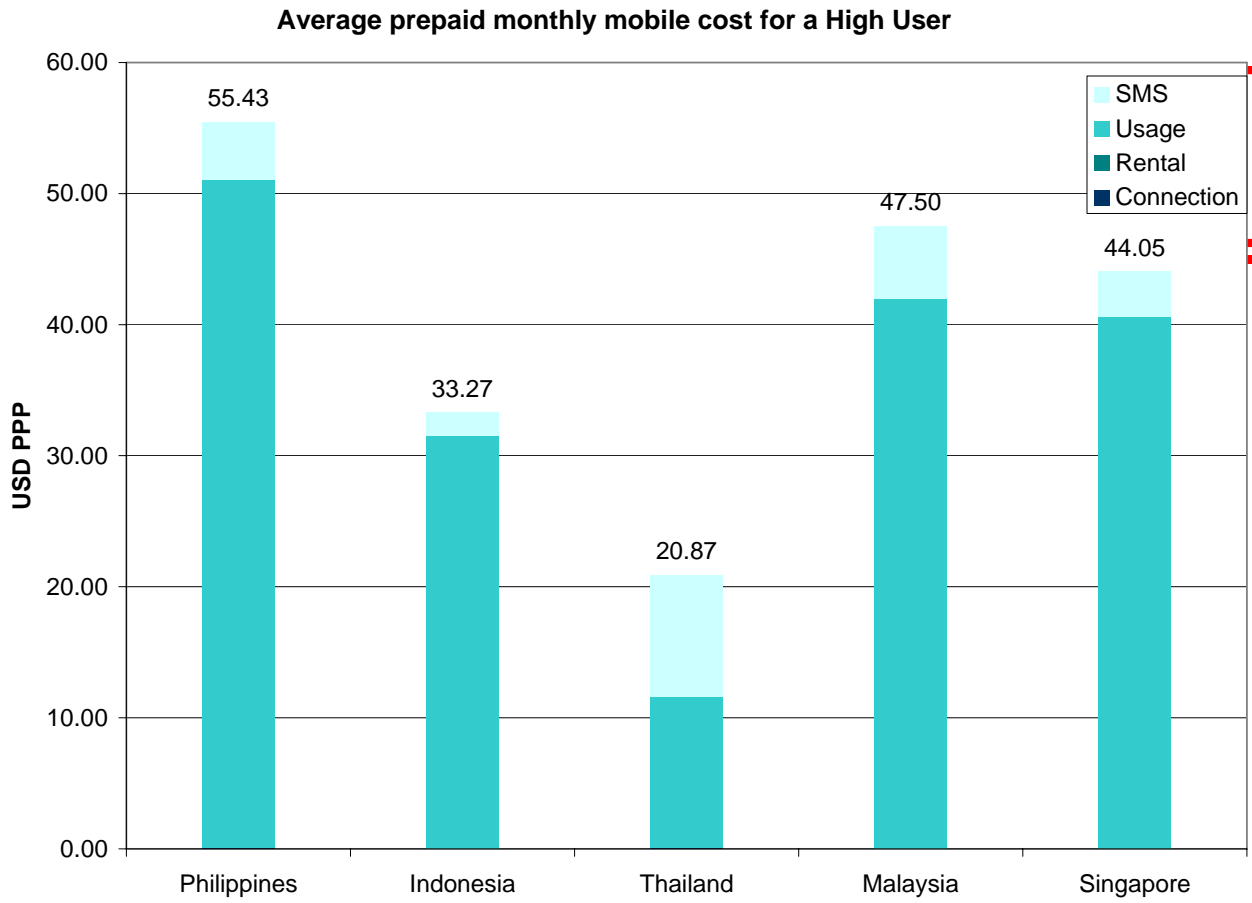
Mobile price baskets (USD PPP)

Average prepaid monthly mobile cost for a Low User

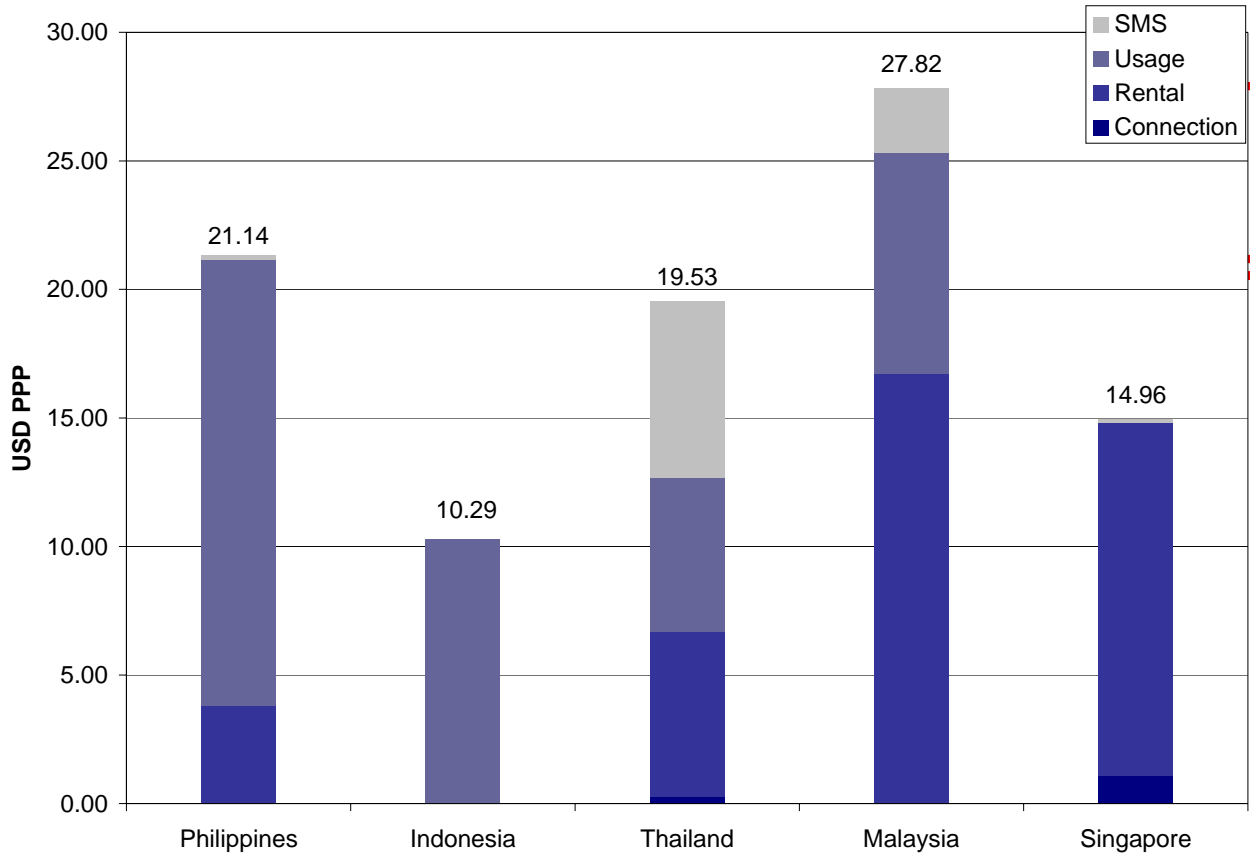


Average prepaid monthly mobile cost for a Medium User

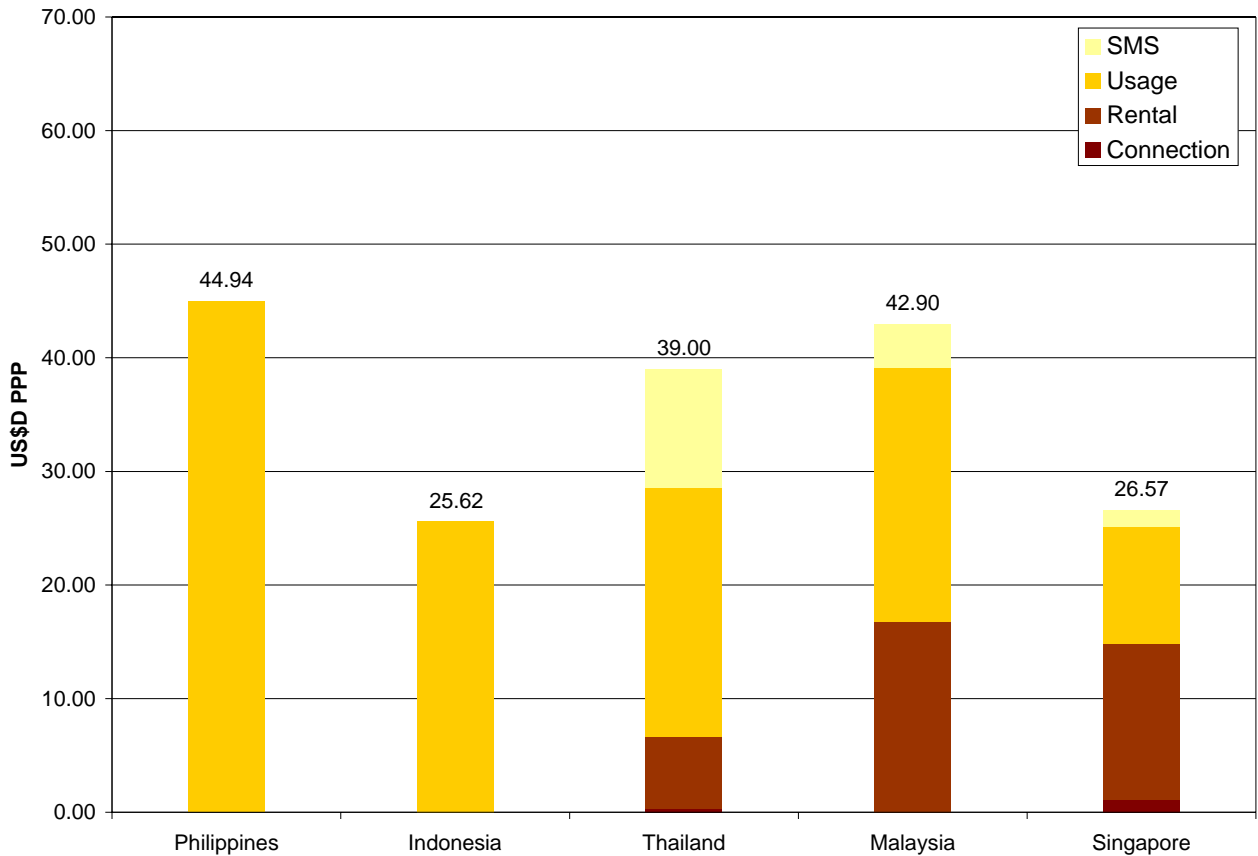




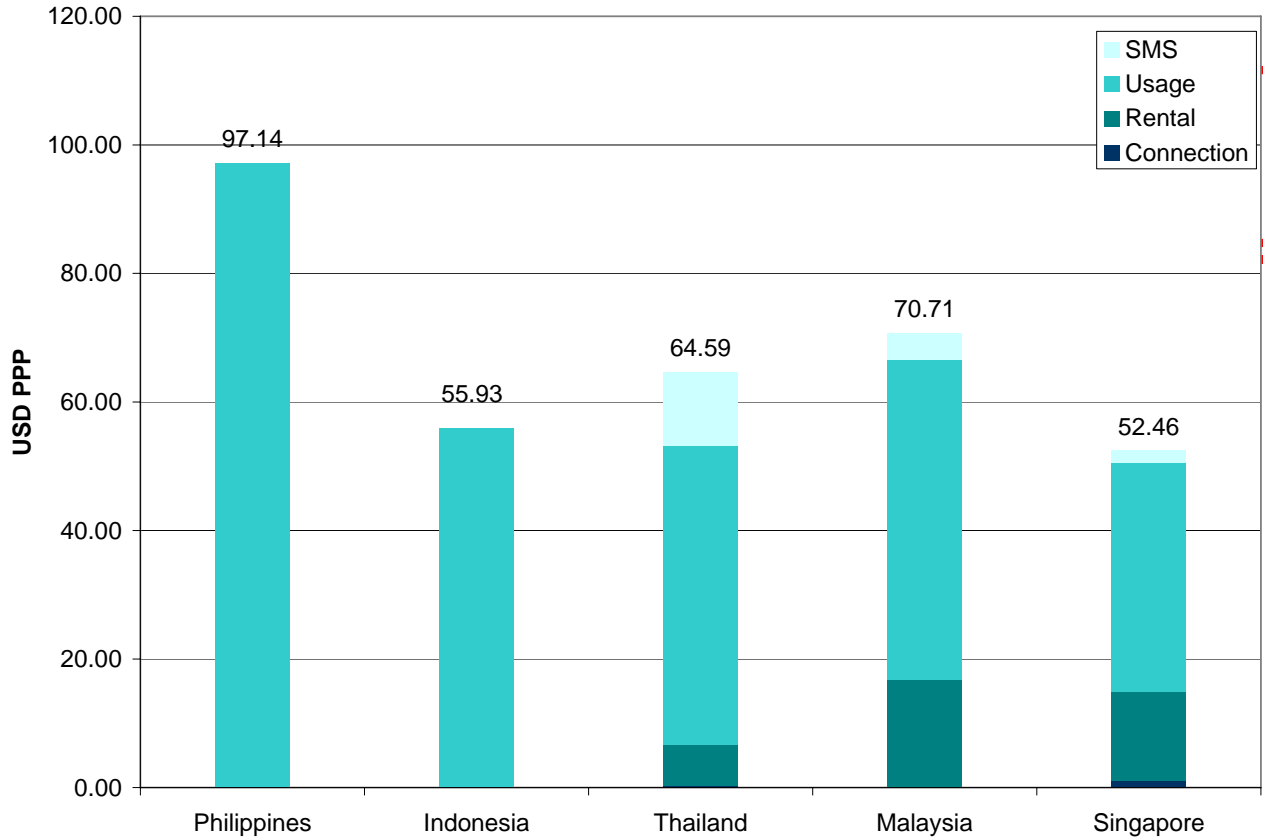
Average postpaid monthly mobile cost for a Low User



Average postpaid monthly mobile cost for a Medium User



Average postpaid monthly mobile cost for a High User



Notes

1. The calculation of a price basket is based on OECD methodology. Details of methodology available at: http://www.teligen.com/t_basket.asp. MMS and Voicemail charges and use were excluded from calculation of the basket.
2. Prepaid and postpaid baskets were based on Minutes of Use [MOU] data from Indonesia ([Telkomsel](#), June 2008) Malaysia ([Maxis](#), March 2007), Philippines ([SMART](#), June 2008) and Thailand ([AIS](#), June 2008) and SMS data from Philippines ([SMART](#), June 2008). An average basket (weighted by subscribers) is calculated using MOUs. Subscriber data was based on data individually reported by the respective operators or the regulator. Tariff data was based on data for September 2008.
3. OECD call distributions by duration, destination, and time of day were used since relevant data for all eight countries was not available publicly. Where this data was available, the distributions were not presented in the form required for calculating the baskets.
4. The cheapest tariff plan (based on initial connection charges for prepaid plans and monthly rental charges for postpaid plans) of the largest operator (based on subscriber numbers) were covered for each country.
5. Exchanges rates for October 2008 are taken from [Yahoo! Finance](#)
6. USD PPP estimates for 2008 taken from the IMF World Economic Outlook (WEO) Database (October 2008), available at: <http://www.imf.org/external/pubs/ft/weo/2008/02/weodata/index.aspx>.

¹ Bucket-priced SMS data was excluded from the basket

MOBILE PRICE BASKETS (OCTOBER 2008)

Background

Three kinds of price indicators:

- *T-Baskets, OECD* (http://www.teligen.com/t_basket.asp)
OECD-based and OECD-authorized; takes pricing information from the Teligen Master Tariff Database.
A technique to create comparable user baskets based on actual user profiles.
Takes into consideration most popular plans of the largest operator (based on subscribers) in each country; connection charges and monthly subscription; call, SMS and MMS use; taxes; and free minutes/SMS, etc.
- *The Core ICT Indicators document, Partnership on Measuring ICT for Development* (<http://www.itu.int/ITU-D/ict/partnership/>)
Compares the cost of 100 minutes of use per month (50 minutes of local peak time calling and 50 minutes of local off-peak calling), and is intended to represent an average use basket which is applicable to individual consumers.
- *ITU basket of call charges*
Considers separate indicators for connection charges, rental, SMS and the price of a 3-minute local call.

Why OECD T-Baskets?

- Provides a comprehensive tariff indicator as opposed to other methodologies.
- Has been in use since 1995 with periodic recalibrations and improvements.

Adapted methodology (based on OECD methodology)

1. *Basket composition:*

- The price of the handset and handset subsidies are **not** taken into account in the basket.
- 1/3 of the registration or installation charges (i.e. depreciated over 3 years) where applicable.
- Monthly rental charges and any optional charges that may apply to the package.
- The usage profile will also include a number of SMS messages per month.
- The three user baskets that are taken into consideration are:
 - *Low user basket*
 - *Medium user basket*
 - *High user basket*
- Different baskets were calculated for prepaid and postpaid plans.
- The baskets compositions² used are as follows:

	OECD ³	Prepaid basket ⁴	Postpaid basket ⁵
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² OECD methodology includes MMS data in addition to call and SMS data; however, this component has been removed from our basket comparisons.

³ OECD methodology provides call volumes per year. Since data from the countries considered here are available in the form of minutes of use per month or year and not in call volumes, we convert OECD call volumes into minutes of use per year or month, by making use of the average duration of call data (as discussed in point 5).



Voice, minutes of use per month			
Low User	46	31	58
Medium User	119	80	150
High User	256	173	323
SMS per month			
Low User	33	23	53
Medium User	50	34	80
High User	55	38	88

2. Call destination (in minutes):

- Local area fixed line: this is used to accommodate the tariffs that have separate charges for the local area. When such charges are not available, this proportion of minutes is included in the 'National fixed line' category.
- National fixed line: this covers all fixed line minutes outside the local area, except in cases as noted above.
- Same network mobile (On-net): this includes all minutes to mobiles in the same mobile network as the caller. In the case of differences between on-net local and national tariffs, the total on-net minutes are weighted by 65% to 35% respectively and total charges are calculated based on this split.
- Other network mobile (Off-net): this includes minutes to all other mobile networks in the caller's country. When the charges are different depending on destination network, the market shares based on subscriber numbers are used for weighting the charges. Up to three other networks will be considered in each country.
- Distribution of minutes across different destinations are given as a percentage of the total number of minutes used/month. This distribution was used across all baskets:

Call made to	Low User	Medium User	High User
Local, Fixed line	0.16	0.15	0.14
National, Fixed line	0.08	0.08	0.08
On-net, Mobile	0.52	0.52	0.51
Off-net, Mobile	0.24	0.26	0.28
Voicemail ⁶	0.00	0.00	0.00

3. SMS destination:

⁴ Prepaid and postpaid baskets were based on Minutes of Use [MOU] data from Indonesia ([Telkomsel](#), June 2008) Malaysia ([Maxis](#), March 2007), Philippines ([SMART](#), June 2008) and Thailand ([AIS](#), June 2008); SMS data was based on data from Philippines ([SMART](#), June 2008). The data was weighted by total mobile subscriber data for the four countries, and was used to calculate the baskets for all five countries. Only average/medium user data is available publicly, therefore the OECD low:medium:high user ratios were applied to the prepaid and postpaid baskets.

⁵ This basket is based on data as specified above.

⁶ As of February 2006, OECD baskets take voicemail into consideration; however this service/feature is not included in the Asian-based baskets at this time (due to low use and/or even the lack of provision of this service) and the OECD call distributions have been adjusted accordingly.

- a. On-net: this includes all SMSs to mobiles in the same mobile network as the sender. In the case of differences between on-net local and national tariffs, the total on-net SMSs are weighted by 65% to 35% respectively and total charges are calculated based on this split.
- b. Off-net: this includes SMSs to all other mobile networks in the sender's country. When the charges are different depending on destination network, the market shares based on subscriber numbers are used for weighting the charges. Up to three other networks will be considered in each country.

SMS	Low user	Medium user	High user
On-net	0.65	0.65	0.65
Off-net	0.35	0.35	0.35

4. *Peak/off-peak differentials:* Instead of splitting time and day into distinct times and days the following approach will be used:

- a. Peak at weekdays – most expensive time during daytime
- b. Off-peak at weekdays – cheapest time before midnight
- c. Weekend – at daytime Sundays
- d. Distribution of minutes over time of day is given as a percentage of the number of minutes:

	Low User	Medium User	High User
Peak	0.48	0.50	0.60
Off peak	0.25	0.24	0.19
Weekend	0.27	0.26	0.21

5. *Call duration:* There will be four separate call durations:

- a. Local and national fixed line calls
- b. Same network mobile calls (On-net)
- c. Other network mobile calls (Off-net)
- d. Voicemail calls
- e. Call durations for each basket:

By duration	Low User	Medium User	High User
Local and national, Fixed line	1.5	1.8	1.7
On-net, Mobile	1.6	1.9	1.9
Off-net, Mobile	1.4	1.7	1.8

6. *Treatment of taxes:* Tariffs include value added tax (VAT), goods and services tax (GST) and/or any other communication levies.

7. *Inclusive minutes and SMS messages:*

- a. Any inclusive minutes will be deducted from the basket before starting the calculation of usage cost. The inclusive minutes are assumed to be used up with the same calling pattern is described in the basket i.e. the same/peak off-peak ratio and the same distribution across destinations. Where the inclusive minutes are clearly limited to specific destinations or times of day this will be taken into account. No transfer of unused minutes is taken into account.
- b. Any inclusive SMS message will be deducted from the basket before starting the calculation of SMS cost, up to the number of messages in the basket.

8. *Selection of package and operator:*

- a. The largest operator (by subscriber numbers) in each country is considered.
- b. The cheapest tariff plan of the largest operator is considered:

- for prepaid – plans with the lowest connection charges; and
 - for postpaid – plans with the lowest rental are considered.
- These plans are applied across all three baskets (low, medium and high).⁷

9. *Timeframe*: Basket results are calculated for a period of one month.

10. *Currency calculations*: Tariffs are made available in USD and USD PPP.

11. *Other assumptions*:

- For most countries considered here, data on call and SMS distributions by destination, time of day and duration were not publicly available. Where available, these distributions were not presented in the form required for calculating the baskets, and available only for average users (i.e. applicable to medium user baskets). As such the latest OECD weights have been utilized (detailed above in points 2, 3, 4, and 5) to calculate the price baskets for all eight countries. While the OECD weights may not reflect Asian usage patterns accurately, they were loosely verified using LIRNEasia's Teleuse@BOP findings and were deemed applicable for use.
- Incoming call charges have been considered in the construction of the baskets, on the assumption that outgoing minutes = incoming minutes.

Tariff packages

- Philippines – SMART Communications
 - Postpaid – Consumable Plan 500
 - Prepaid – Smart Buddy
- Indonesia - Telkomsel
 - Postpaid – Helo Hybrid
 - Prepaid – SimPATI Promotion
- Thailand – Advanced Info Service (AIS) Plc.
 - Postpaid – GSM Net SIM 99
 - Prepaid – Commercial SIM
- Malaysia – Maxis Communications
 - Postpaid – Standard Plan
 - Prepaid – Hotlink Plan
- Singapore – SingTel
 - Postpaid – iOne Super Value
 - Prepaid – Hi Card

⁷ Although it would seem more suitable to apply a plan targeted at low users (assuming plans with low rental + high usage charges are targeted at this group of users) for low user baskets, and a plan targeted at medium and higher users (assuming high rental + low usage charges are targeted at these groups of users) for medium and high user baskets, the difficulties in deciding which plans to consider based on the assumptions mentioned, and the lack of information on who uses which plans (i.e. are we certain that low, medium and high users of mobile opt for the plans targeted at them?) render this almost impossible. Also, the use of varying tariff plans across different user baskets makes the comparison of results from one country to another somewhat arbitrary.

Mobile tariff comparison

POSTPAID				PHILIPPINES	INDONESIA		THAILAND		MALAYSIA		SINGAPORE
				Consumable Plan 500	Helo Hybrid		GSM Net SIM 99		Standard Plan		iOne Super Value
Connection Charges				0	0		4.288		0		28.348
Subscription (rental) fee				0	0		2.849		8.313		9.935
Minimum usage				10.134	2.283		N/A		N/A		N/A
Free minutes (USD)				N/A	N/A		N/A		N/A		N/A
Free minutes (in minutes)				N/A	N/A		N/A		N/A		80
					Local	National	1st min	2nd min	Local	National	
Usage charges	Fixed	Incoming	Peak	0	0	0	0	0	0	0	0
			Off-peak	N/A	N/A	N/A	N/A	N/A	0	0	N/A
			Weekend	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Outgoing	Peak	0.155	0.059	0.110	0.086	0.014	0.083	0.083	0.106
			Off-peak	N/A	N/A	N/A	N/A	N/A	0.042	0.083	N/A
			Weekend	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	On-net	Incoming	Peak	0	0	0	0	0	0	0	0
			Off-peak	N/A	N/A	N/A	N/A	N/A	0	0	N/A
			Weekend	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Outgoing	Peak	0.134	0.059	0.078	0.086	0.014	0.083	0.083	0.106
			Off-peak	N/A	N/A	N/A	N/A	N/A	0.042	0.083	N/A
			Weekend	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Off-net	Incoming	Peak	0	0	0	0	0	0	0	0
			Off-peak	N/A	N/A	N/A	N/A	N/A	0.000	0.000	N/A
			Weekend	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		Outgoing	Peak	0.155	0.068	0.110	0.086	0.014	0.083	0.083	0.106
Off-peak			N/A	N/A	N/A	N/A	N/A	0.042	0.083	N/A	
Weekend			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Free SMSs				150	100		N/A	N/A	N/A		50
SMS charges		Basic charge		N/A	N/A		N/A	N/A	N/A		N/A
		On-net		0.021	0.011		0.058		0.014		0.035
		Off-net		0.021	0.014		0.058		0.042		0.035
Exchange rate: USD 1 =				PHP 49.34	IDR 10950		THB 34.75		MYR 3.609		SGD 1.5098
Source				Yahoo! Finance	Yahoo! Finance		Yahoo! Finance		Yahoo! Finance		Yahoo! Finance

PREPAID				PHILIPPINES	INDONESIA		THAILAND	MALAYSIA	SINGAPORE	
				Smart Buddy	SimPATI promotion		Commerical SIM	Hotlink Plan	Hi card	
Connection Charges				1.115	0		1.410	2.771	5.299	

Subscription (rental) fee			0	0			0	0	0		
Free minutes (in USD)			N/A	N/A			N/A	4.156	N/A		
Usage charges	Fixed	Incoming	Peak	0	Local	National	Applicability	0	0	0.106	
			Off-peak	N/A				0	N/A	0.053	
			Weekend	N/A				N/A	N/A	0.053	
		Outgoing	Peak	0.152	0.082	0.192	First min	0.014	0.136	0.106	
					0.003	0.003	Second - fourth mins				
			Off-peak	0.152	N/A	N/A		0.058	0.136	0.053	
		Weekend	0.152	N/A	N/A		N/A	0.136	0.053		
		On-net	Incoming	Peak	0	0	0		0	0	0.106
				Off-peak	N/A	0	0		0	N/A	0.053
	Weekend			N/A	N/A	N/A		N/A	N/A	0.053	
	Outgoing		Peak	0.132	-	-		0.014	0.108	0.106	
			Off-peak	0.132	-	-		0.058	0.108	0.053	
			Weekend	0.132	-	-		N/A	0.108	0.053	
			Timeframe 1 ⁸	-	0.003	0.003	-	-	-	-	
			Timeframe 2 ⁹		-	0.082	0.082	First 20 secs	-	-	-
					-	0.003	0.003	> 20 secs			
			Timeframe 3 ¹⁰		-	0.082	0.082	First min	-	-	-
					-	0.003	0.003	> 1 min	-	-	-
	Timeframe 4 ¹¹			-	0.082	0.082	First 1.5 mins	-	-	-	
				-	0.003	0.003	> 1.5 mins				
	Off-net		Incoming	Peak	0	0	0		0	0	0.106
				Off-peak	N/A	N/A	N/A		0	N/A	0.053
		Weekend		N/A	N/A	N/A		N/A	N/A	0.053	
		Outgoing	Peak	0.152	0.137	0.137	First min	0.014	0.136	0.106	
				0.003	0.003	Second - fourth mins					
Off-peak			0.152	N/A	N/A		0.058	0.136	0.053		
Weekend			0.152	N/A	N/A		N/A	0.136	0.053		
Free SMSs			50.000	N/A			N/A	N/A	N/A		
SMS charges		Basic charge	N/A	N/A			0.058	N/A	0.033		
		On-net	0.020	0.009			N/A	0.019	N/A		
		Off-net	0.041	0.014			N/A	0.042	N/A		
Exchange rate: USD 1 =			PHP 49.34	IDR 10950			THB 34.75	MYR 3.609	SGD 1.5098		
Source			Yahoo! Finance	Yahoo! Finance			Yahoo! Finance	Yahoo! Finance	Yahoo! Finance		

⁸ 0000 - 0559
⁹ 0600 - 1159
¹⁰ 1200 - 1759
¹¹ 1800 - 2359

