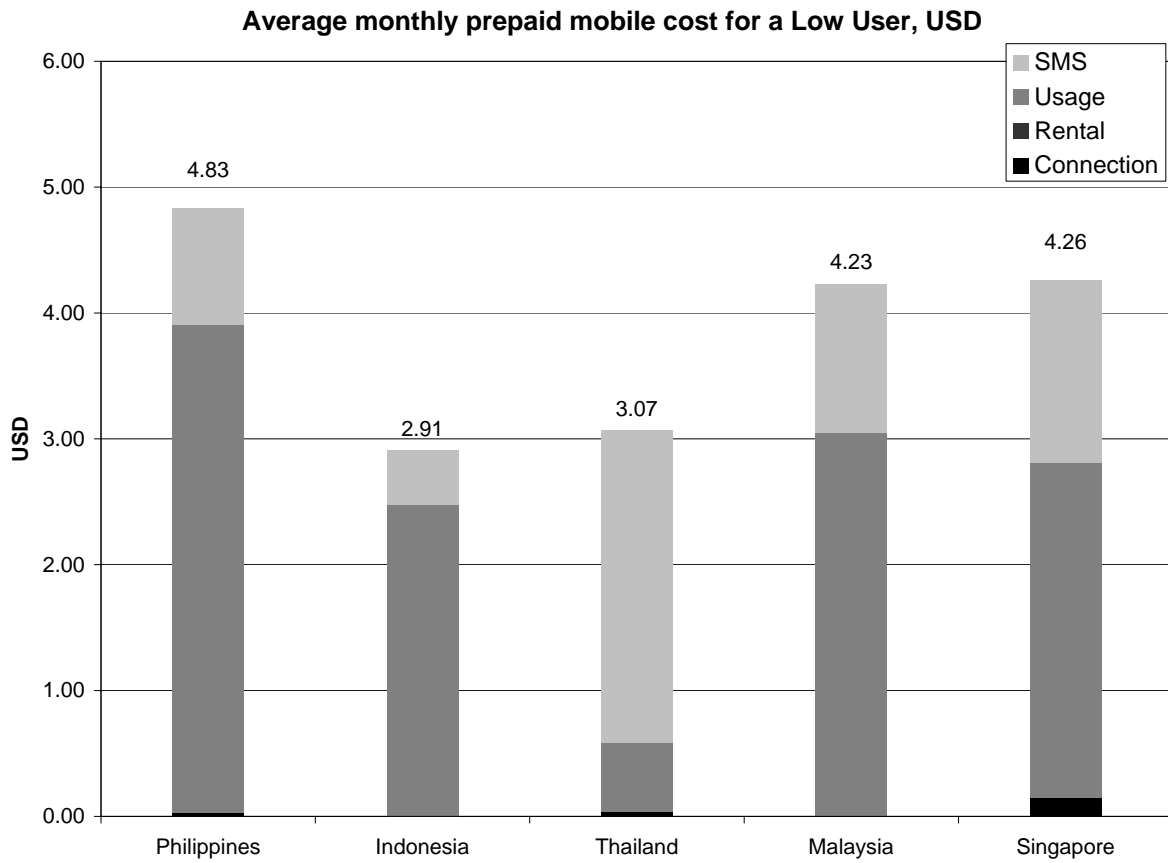
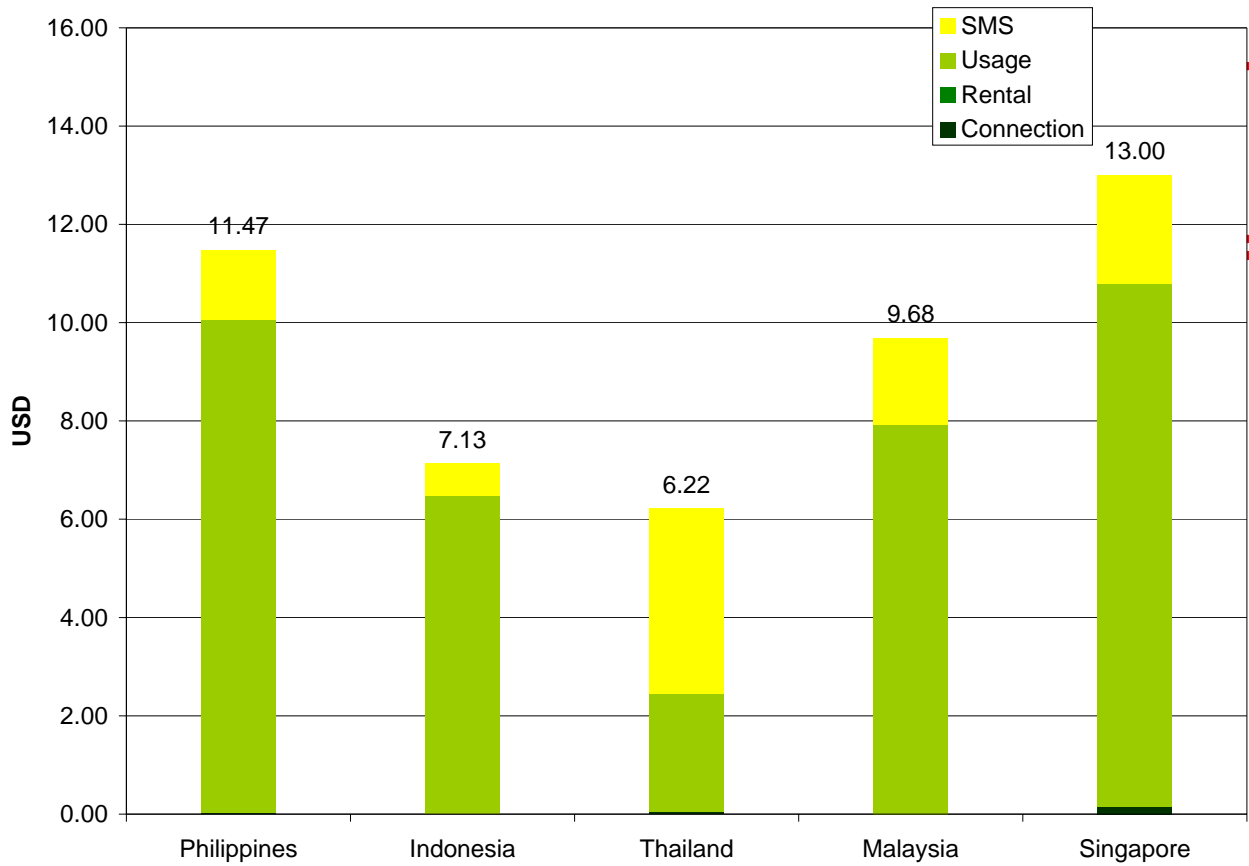


February 2009

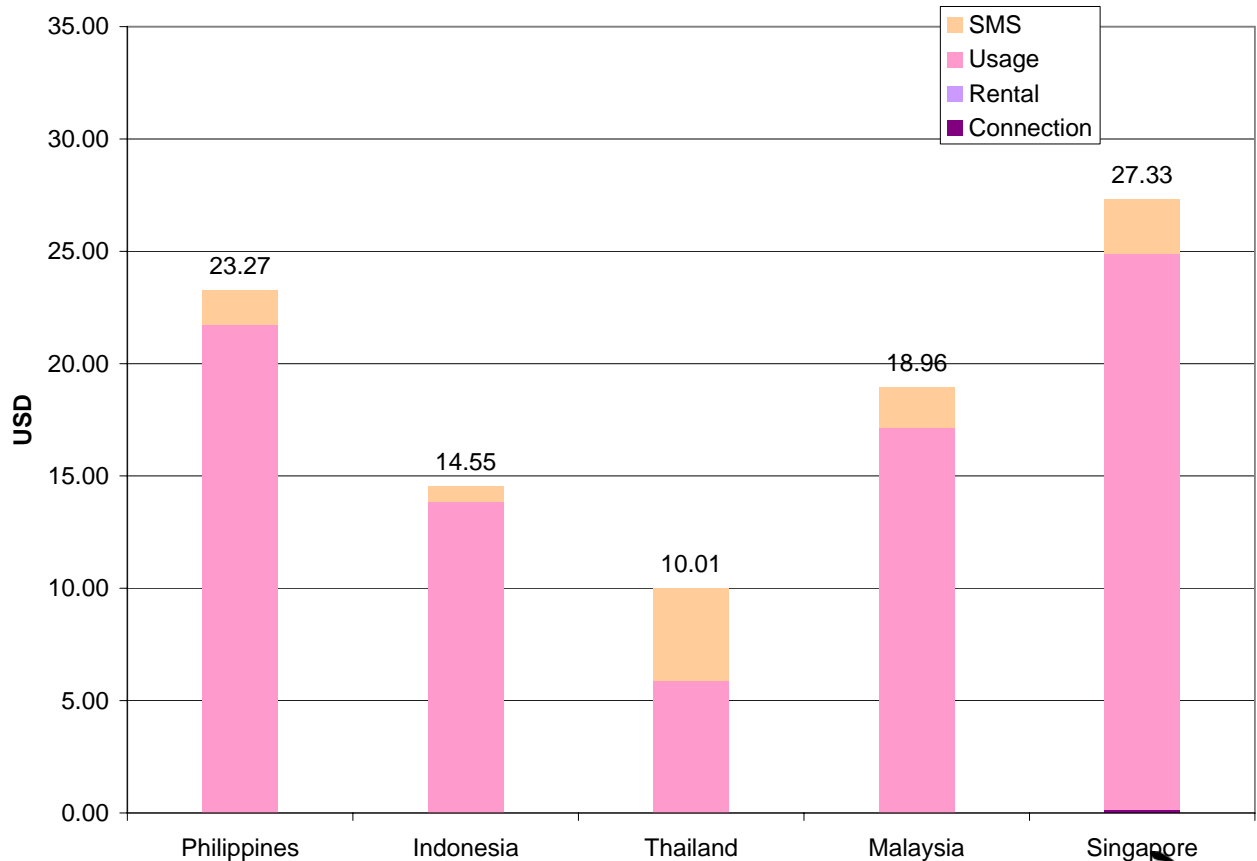
### Mobile price baskets (USD)



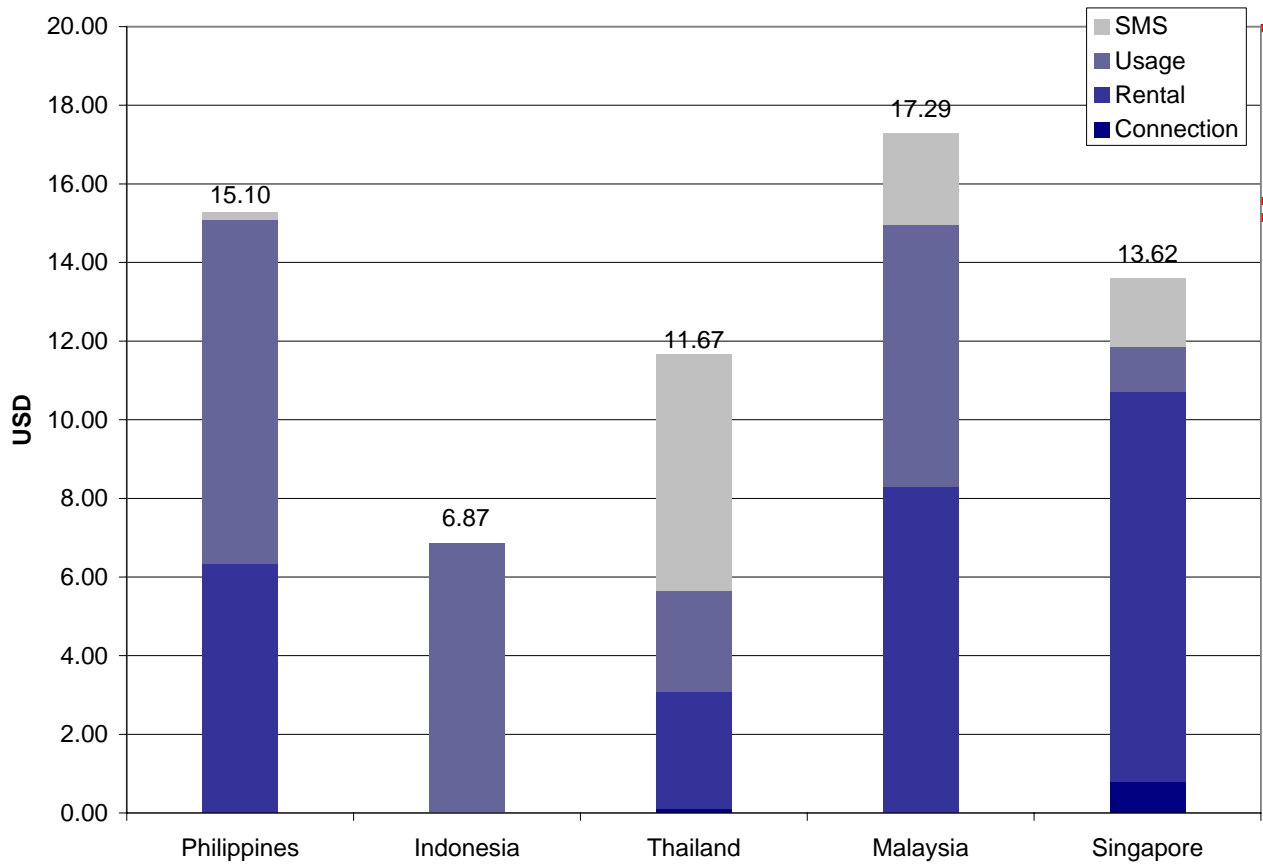
Average monthly prepaid mobile cost for a Medium User, USD



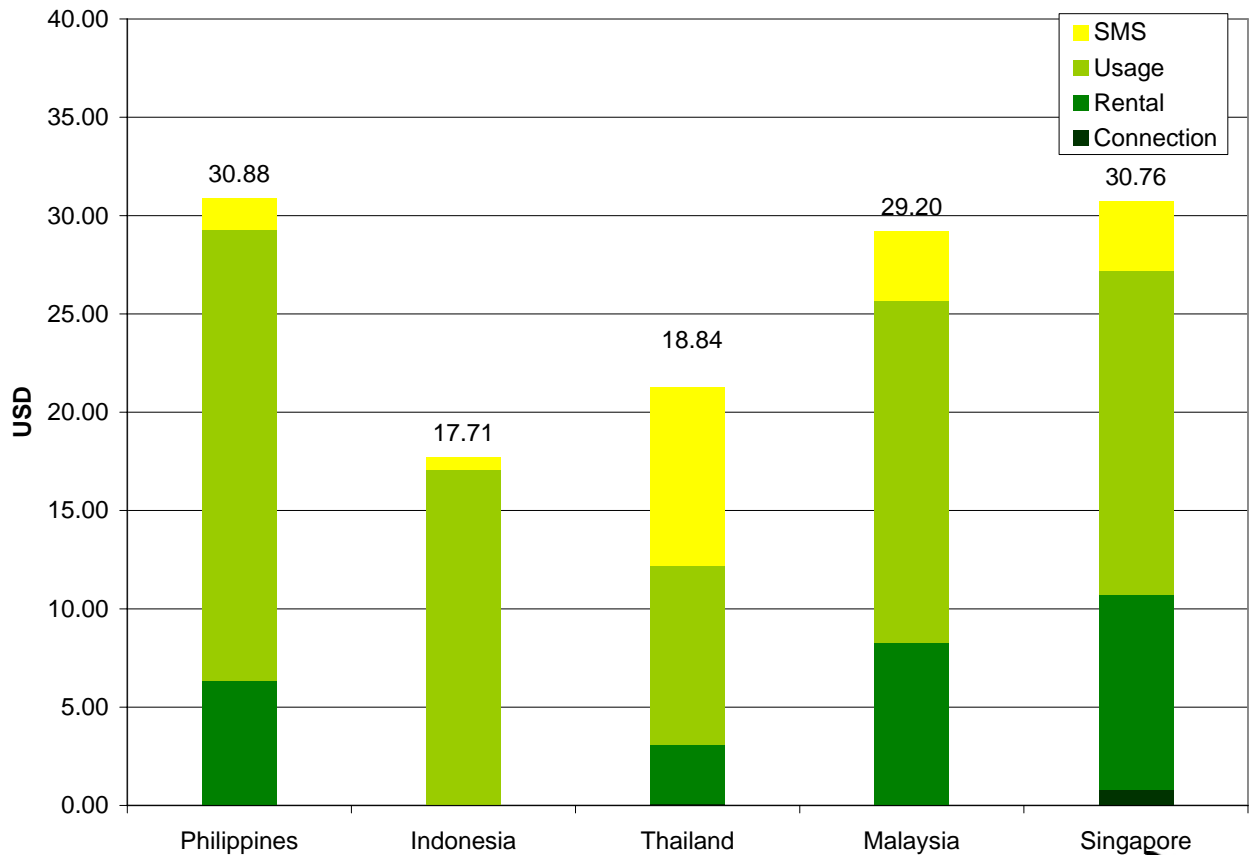
Average monthly prepaid mobile cost for a High User, USD



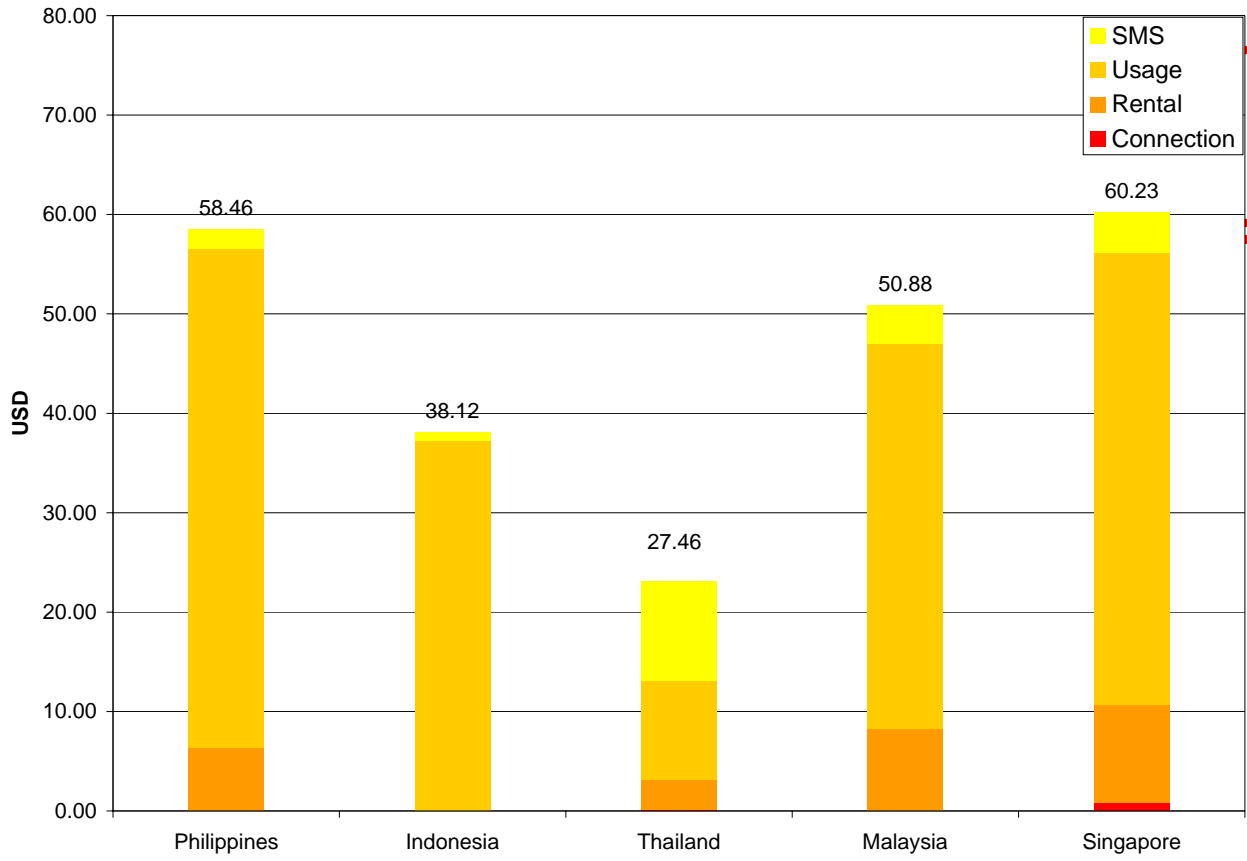
Average monthly postpaid mobile cost for a Low User, USD



Average monthly postpaid mobile cost for a Medium User, USD

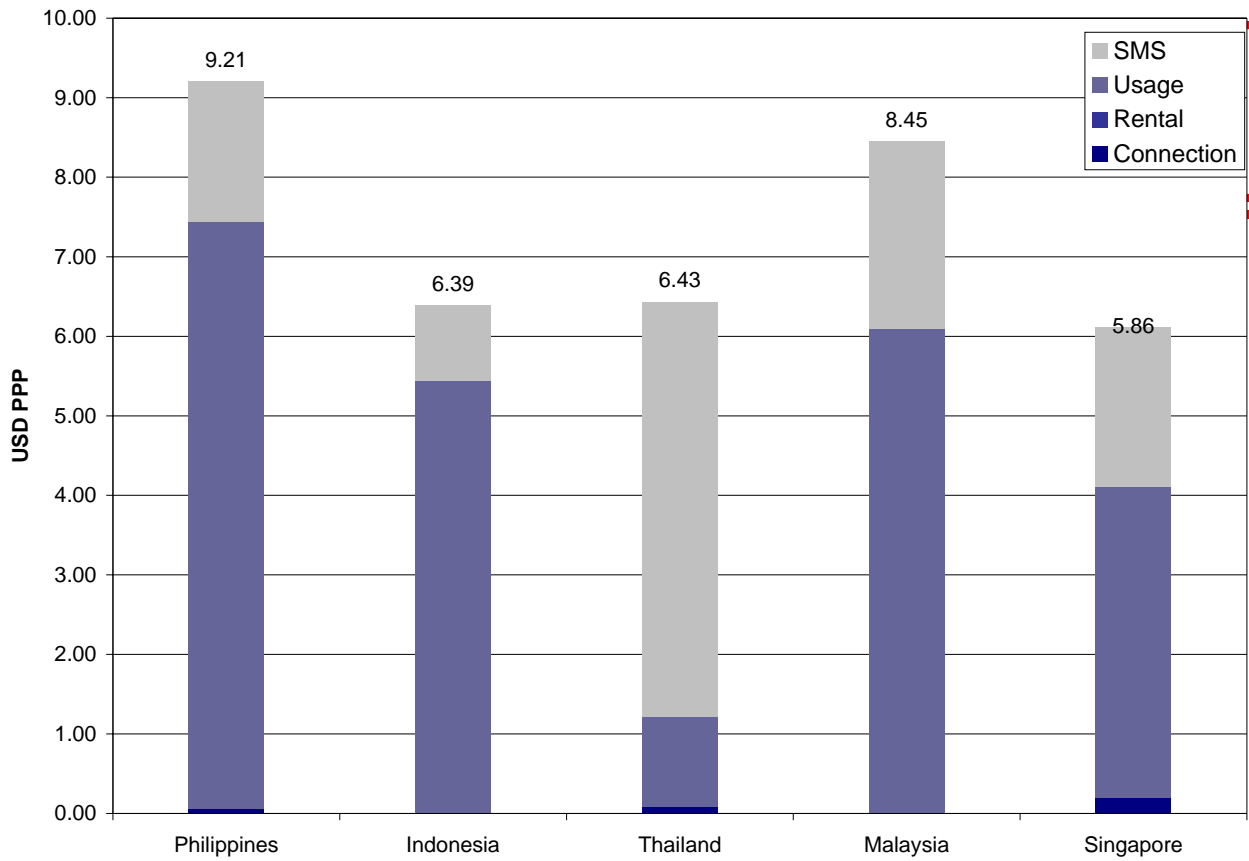


Average monthly postpaid mobile cost for a High User, USD

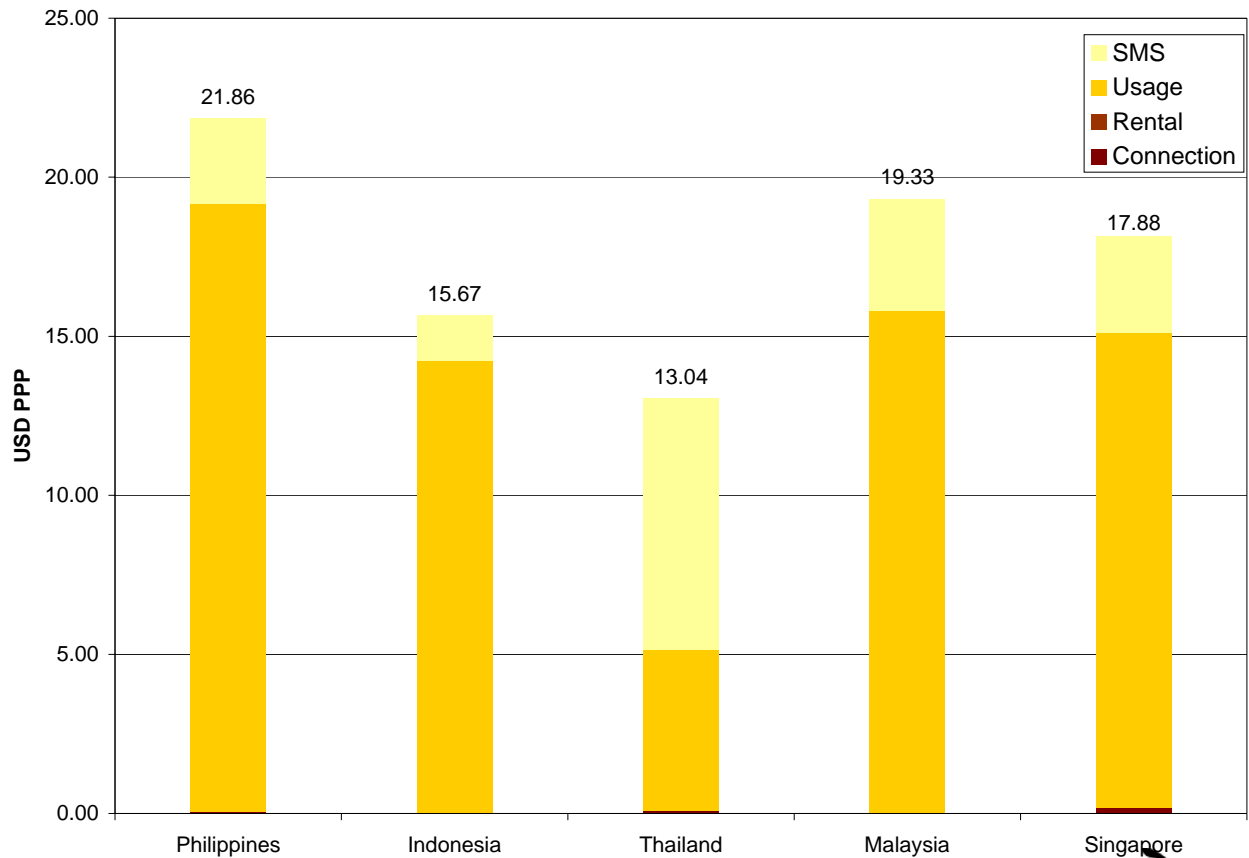


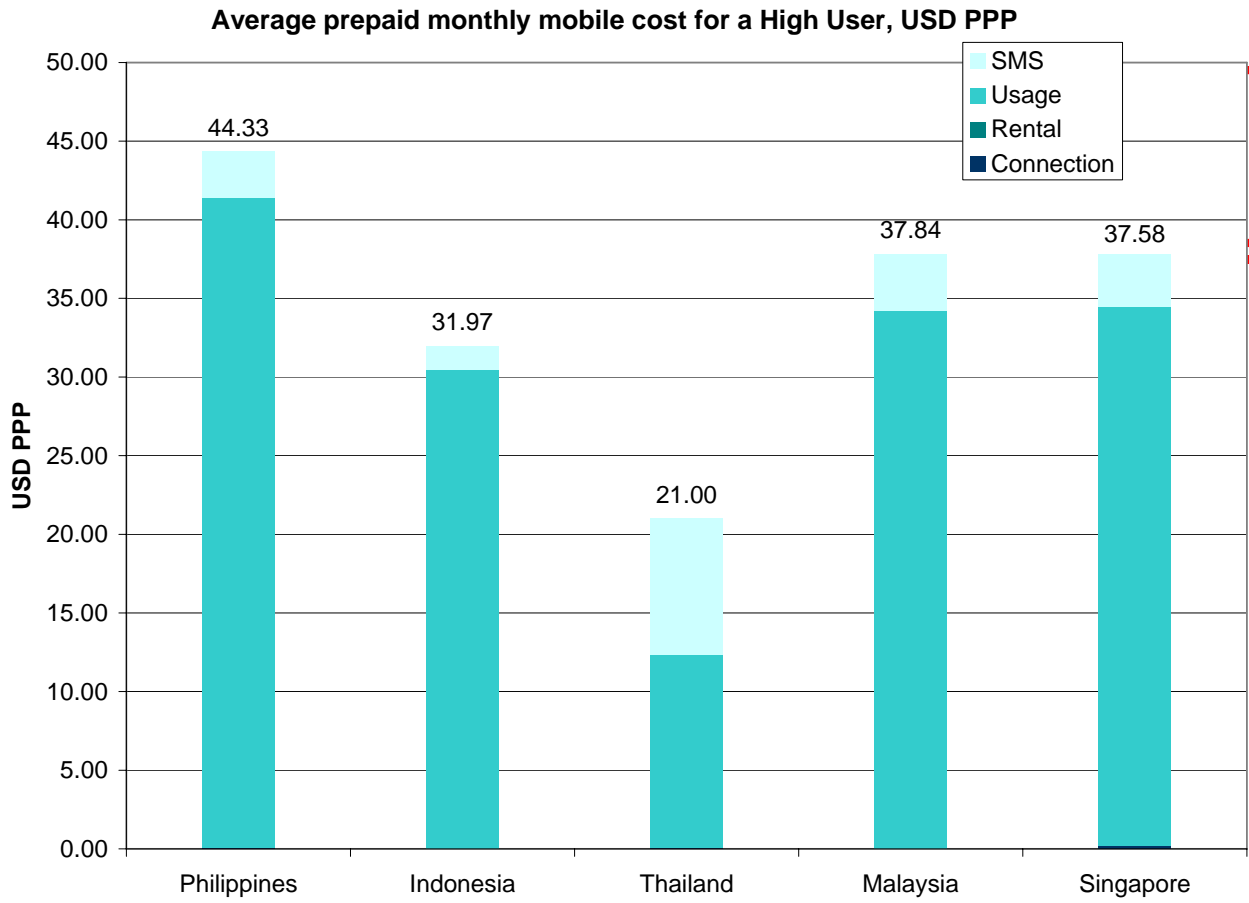
## Mobile price baskets (USD PPP)

### Average prepaid monthly mobile cost for a Low User, USD PPP

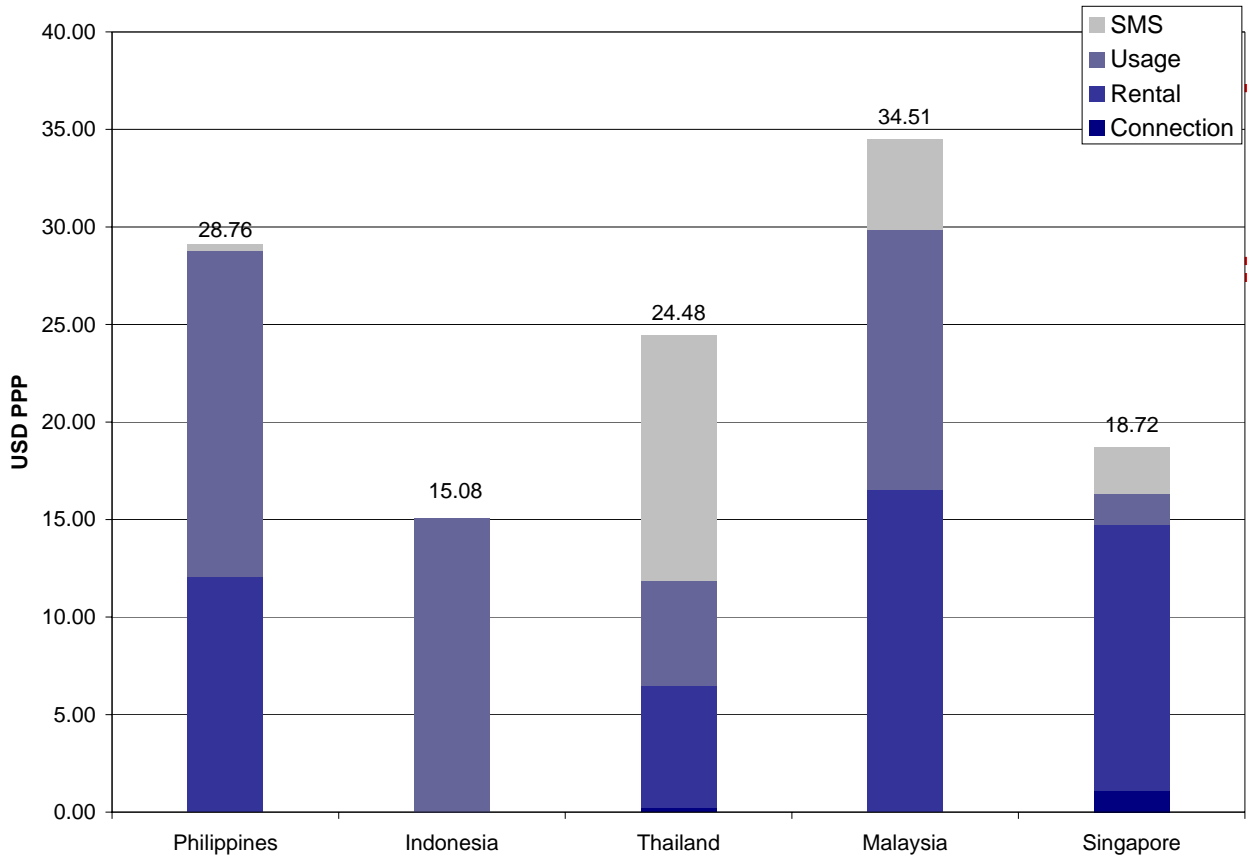


### Average prepaid monthly mobile cost for a Medium User, USD PPP

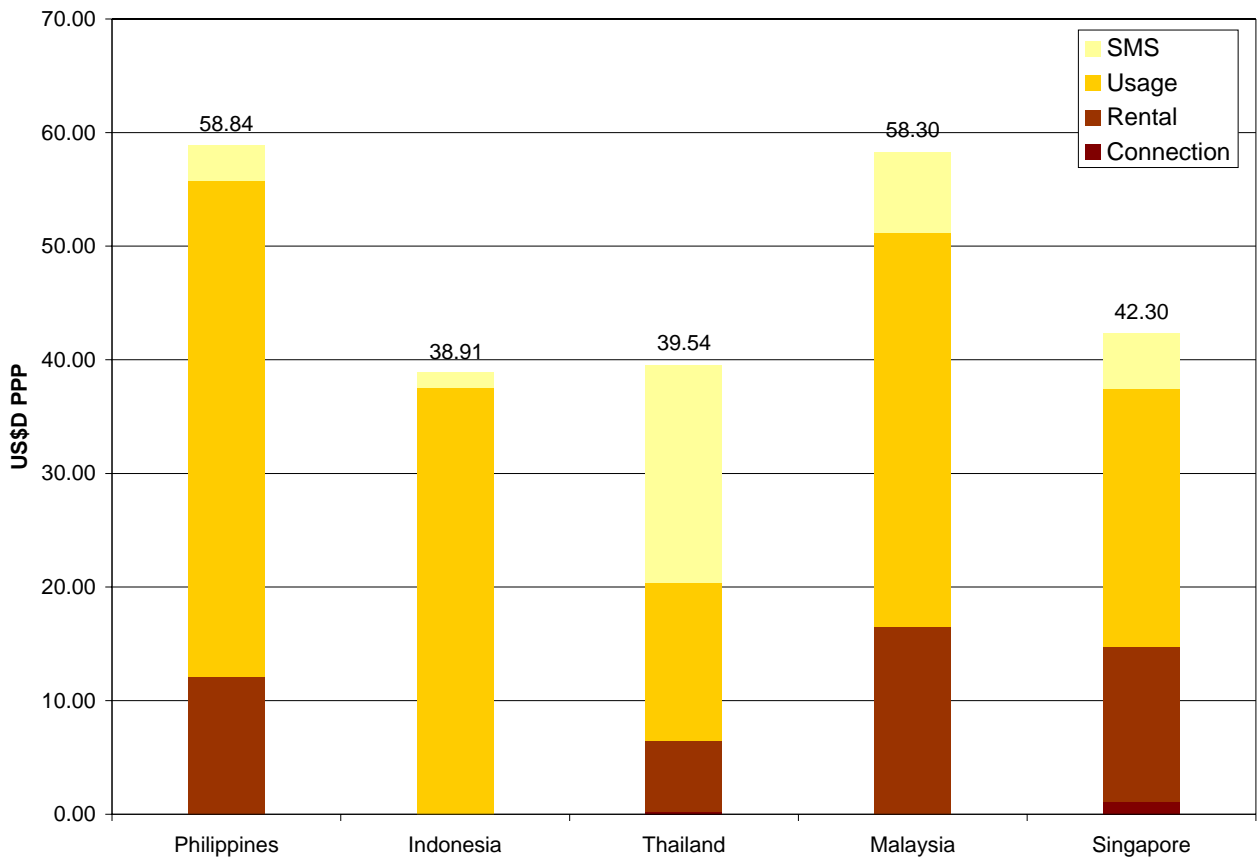




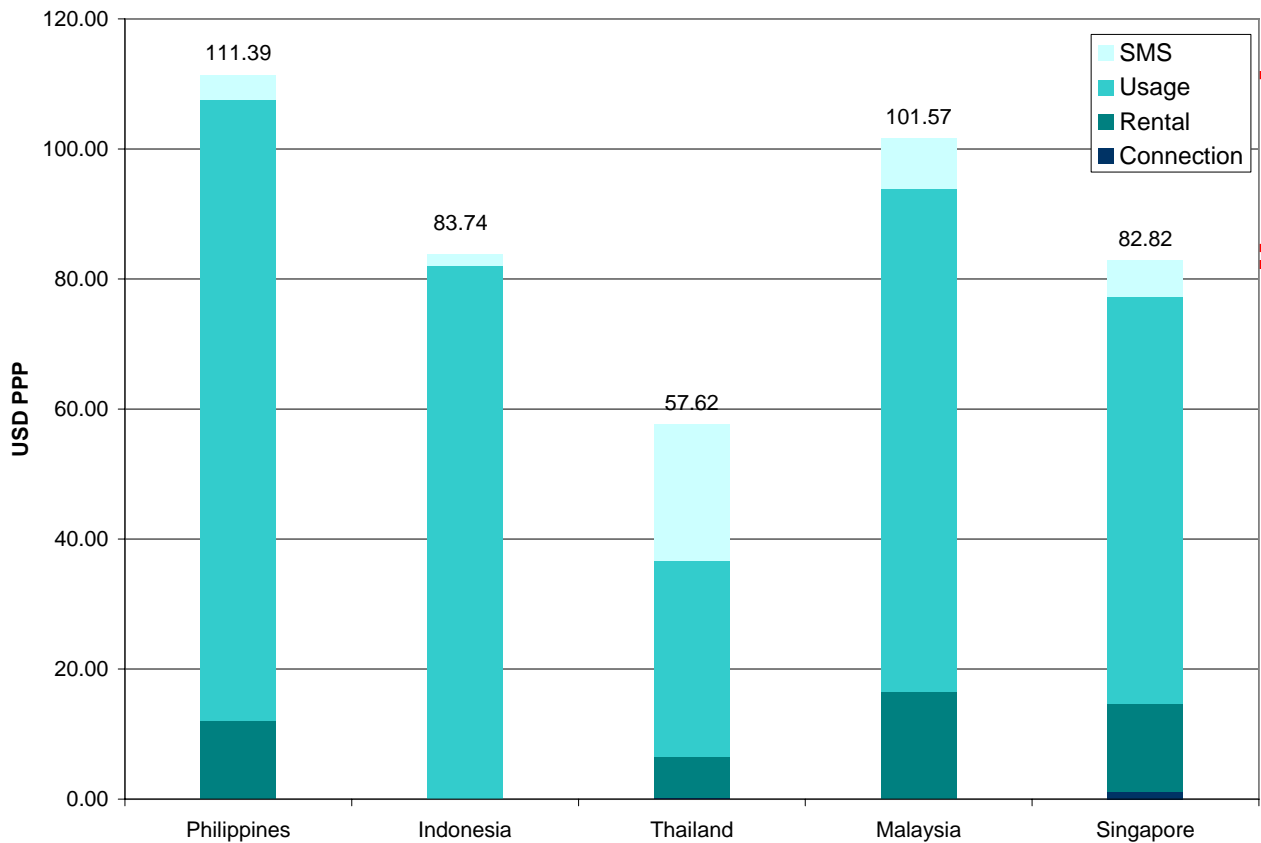
Average postpaid monthly mobile cost for a Low User, USD PPP



Average postpaid monthly mobile cost for a Medium User, USD PPP



## Average postpaid monthly mobile cost for a High User, USD PPP



### 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](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, September 2008) Malaysia (Maxis, March 2007), Philippines (SMART, September 2008) and Thailand (AIS, September 2008) and SMS data from Malaysia (Maxis, extrapolated figure for 2008 based on data for 2005) and the Philippines (SMART<sup>1</sup> September 2008) Tariff data was based on data for February 2009. Subscriber data was based on data individually reported by the respective operators.
3. A weighted average of MOU and SMS usage based on these four countries and their respective subscriber numbers was used for the calculation of prepaid and postpaid baskets for all five countries.
4. OECD call distributions by duration, destination, and time of day were used since relevant data for all five countries was not available publicly. Where this data was available, the distributions were not presented in the form required for calculating the baskets.
5. 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.
6. Exchanges rates for February 2009 are taken from: <http://www.oanda.com/>
7. 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>.

<sup>1</sup> Bucket-priced SMS data was excluded from the basket



# MOBILE PRICE BASKETS (FEBRUARY 2009)

## Background

Three kinds of price indicators:

- *T-Baskets, OECD* ([http://www.teligen.com/t\\_basket.asp](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 compositions<sup>2</sup> used are as follows:

	OECD <sup>3</sup>	Prepaid basket	Postpaid basket
Voice, minutes of use per month			
Low User	46	26	91
Medium User	119	68	235
High User	256	147	507
SMS per month			
Low User	33	44	99
Medium User	50	67	150
High User	55	73	165

### 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.

<sup>2</sup> OECD methodology includes MMS data in addition to call and SMS data; however, this component has been removed from our basket comparisons.

<sup>3</sup> 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).

- b. National fixed line: this covers all fixed line minutes outside the local area, except in cases as noted above.
- c. 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.
- d. 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.
- e. 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 <sup>4</sup>	0.00	0.00	0.00

3. *SMS destination:*

- 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 in a 24-hour day
- b. Off-peak at weekdays – cheapest time in a 24-hour day
- c. Weekend – at daytime Saturdays and/or 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:*

<sup>4</sup> 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. 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).<sup>5</sup>
9. *Timeframe:* Basket results are calculated for a period of one month.
10. *Currency calculations:* Tariffs are made available in US\$ and US\$ PPP.
11. *Other assumptions:*
- a. 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.
  - b. Incoming call charges have been considered in the construction of the baskets, on the assumption that outgoing minutes = incoming minutes.

### **Tariff packages**

1. Philippines – SMART Communications
  - a. Postpaid – Smart Gold Lite 300
  - b. Prepaid – Smart Buddy
2. Indonesia - Telkomsel
  - a. Postpaid – Helo Hybrid
  - b. Prepaid – SimPATI Promotion
3. Thailand – Advanced Info Service (AIS) Plc.
  - a. Postpaid – GSM Net SIM 99
  - b. Prepaid – Non-commercial SIM
4. Malaysia – Maxis Communications
  - a. Postpaid – Standard Plan
  - b. Prepaid – Hotlink Plan
5. Singapore – SingTel
  - a. Postpaid – iOne Super Value
  - b. Prepaid – Hi Card

<sup>5</sup> 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

PRE-PAID			PHILIPPINES	INDONESIA			THAILAND	MALAYSIA	SINGAPORE	
			Smart Buddy	SimPATI Promotion			Non-commercial SIM	New Hotlink Plan	Hi card	
			Local	Local	National	Applicability	Local	Local	Local	
<b>Connection Charges</b>			1.163	N/A			1.387	2.764	5.298	
<b>Subscription (rental) fee</b>			N/A	N/A			N/A	N/A	11.921	
<b>Free minutes (in local currency)</b>			N/A	N/A			N/A	4.147	N/A	
<b>Usage charges</b>	Fixed	Incoming	Peak	N/A	N/A			N/A	N/A	0.106
			Off-peak	N/A	N/A			N/A	N/A	0.053
			Weekend	N/A	N/A			N/A	N/A	0.053
		Outgoing	Peak	0.159	0.076	0.101	N/A	0.057	0.135	0.106
			Off-peak	0.159	N/A	N/A	N/A	0.014	0.135	0.053
			Weekend	0.159	N/A	N/A	N/A	N/A	0.135	0.053
	On-net	Incoming	Peak	N/A	N/A	N/A	N/A	N/A	N/A	0.106
			Off-peak	N/A	N/A	N/A	N/A	N/A	N/A	0.053
			Weekend	N/A	N/A	N/A	N/A	N/A	N/A	0.053
		Outgoing	Peak	0.137	N/A	N/A	N/A	0.057	0.100	0.106
			Off-peak	0.137	N/A	N/A	N/A	0.014	0.100	0.053
			Weekend	0.137	N/A	N/A	N/A	N/A	0.100	0.053
			Time-frame 1 <sup>6</sup>	N/A	0.076		First 10 secs	N/A	N/A	N/A
				N/A	0.003		> 10 secs	N/A	N/A	N/A
			Time-frame 2 <sup>7</sup>	N/A	0.076		First 130 secs	N/A	N/A	N/A
		N/A		0.003		> 130 secs	N/A	N/A	N/A	
		Off-net	Incoming	Peak	N/A	N/A	N/A	N/A	N/A	0.106
				Off-peak	N/A	N/A	N/A	N/A	N/A	0.053
	Weekend			N/A	N/A	N/A	N/A	N/A	0.053	
	Outgoing		Peak	0.159	0.126		N/A	0.057	0.135	0.106
			Off-peak	0.159	N/A		N/A	0.014	0.135	0.053
Weekend			0.159	N/A		N/A	N/A	0.135	0.053	
<b>Free SMSs</b>			50.000	N/A			N/A	N/A	N/A	
<b>SMS charges</b>		Basic charge	0.021	N/A			0.057	N/A	0.033	
		On-net	N/A	0.008			N/A	0.019	N/A	
		Off-net	N/A	0.013			N/A	0.041	N/A	
			PHP	IDR			THB	MYR	SGD	

<sup>6</sup> Time period: 1800 – 2359 (peak)

<sup>7</sup> Time period: 0000 – 0559 (off-peak)

<b>Exchange rate: USD 1 =</b>	47.308	11919.000	35.339	3.617	1.510
<b>Source</b>	<a href="http://www.oanda.com/">http://www.oanda.com/</a>				

POST-PAID				PHILIPPINES	INDONESIA		THAILAND (AIS)	MALAYSIA		SINGAPORE	
				Smart Gold Lite 300	Helo Hybrid		GSM Net SIM 99	Standard Plan		iOne Super Value	
					Local	National		Local	National		
<b>Connection Charges</b>				N/A	N/A		3.113	N/A		28.345	
<b>Subscription (rental) fee</b>				6.341	N/A		2.801	8.293		9.934	
<b>Free minutes (in minutes)</b>				N/A	N/A		N/A	N/A		80	
<b>Usage charges</b>	Fixed	Incoming	Peak	N/A	N/A		N/A	N/A		N/A	
			Off-peak	N/A	N/A		N/A	N/A		N/A	
			Weekend	N/A	N/A		N/A	N/A		N/A	
			Other	N/A	N/A		N/A	N/A		N/A	
		Outgoing	Peak	0.161	0.055	0.101	0.028	0.083	0.083	0.106	
			Off-peak	N/A	N/A		N/A	0.041	0.083	N/A	
			Weekend	N/A	N/A		N/A	N/A		N/A	
			Other	N/A	N/A		N/A	N/A		N/A	
	On-net	Incoming	Peak	N/A	N/A		N/A	N/A		N/A	
			Off-peak	N/A	N/A		N/A	N/A		N/A	
			Weekend	N/A	N/A		N/A	N/A		N/A	
			Other	N/A	N/A		N/A	N/A		N/A	
		Outgoing	Peak	0.042	0.055	0.071	0.028	0.083	0.083	0.106	
			Off-peak	N/A	N/A		N/A	0.041	0.083	N/A	
			Weekend	N/A	N/A		N/A	N/A		N/A	
			Other	N/A	N/A		N/A	N/A		N/A	
	Off-net	Incoming	Peak	N/A	N/A		N/A	N/A		N/A	
			Off-peak	N/A	N/A		N/A	N/A		N/A	
			Weekend	N/A	N/A		N/A	N/A		N/A	
			Other	N/A	N/A		N/A	N/A		N/A	
Outgoing		Peak	0.161	0.063	0.101	0.028	0.083	0.083	0.106		
		Off-peak	N/A	N/A		N/A	0.041	0.083	N/A		
		Weekend	N/A	N/A		N/A	N/A		N/A		
		Other	N/A	N/A		N/A	N/A		N/A		
<b>Free SMSs</b>				75	100		N/A	N/A		50	
<b>SMS charges</b>				Basic charge	0.022	N/A		0.057	N/A		
				On-net	N/A	0.010		N/A	0.014		0.035
				Off-net	N/A	0.013		N/A	0.041		N/A
<b>Exchange rate: USD 1 =</b>				PHP	IDR		THB	MYR		SGD	
<b>Source</b>				47.308	11919.000		35.339	3.617		1.510	
				<a href="http://www.oanda.com/">http://www.oanda.com/</a>							