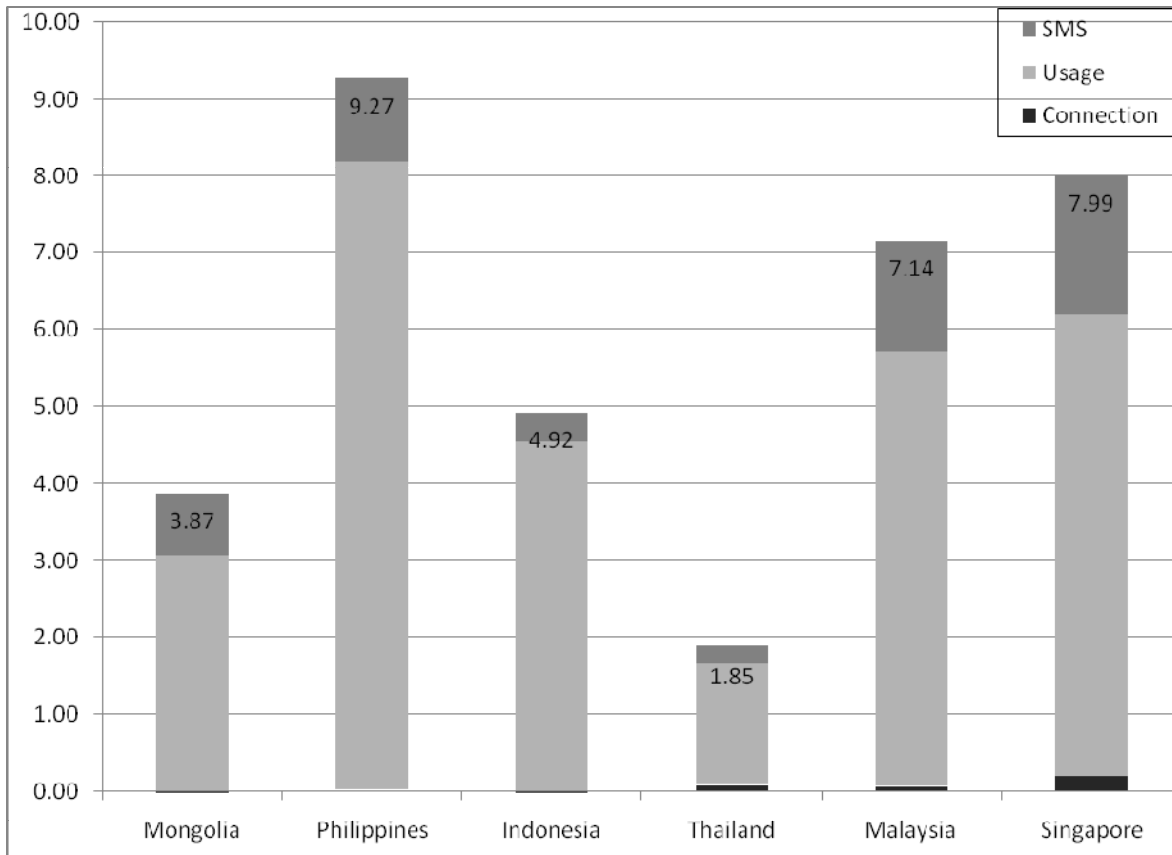


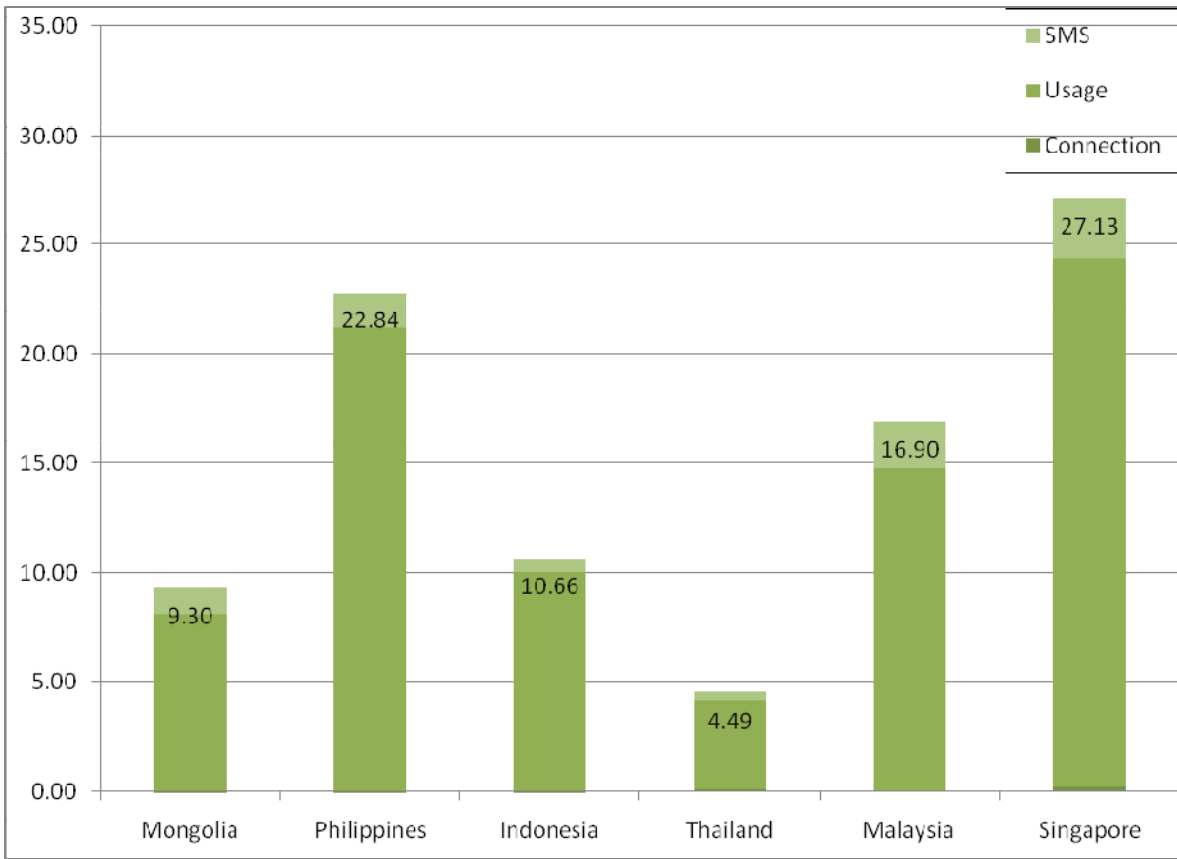
October 2009

## Mobile price baskets (USD)

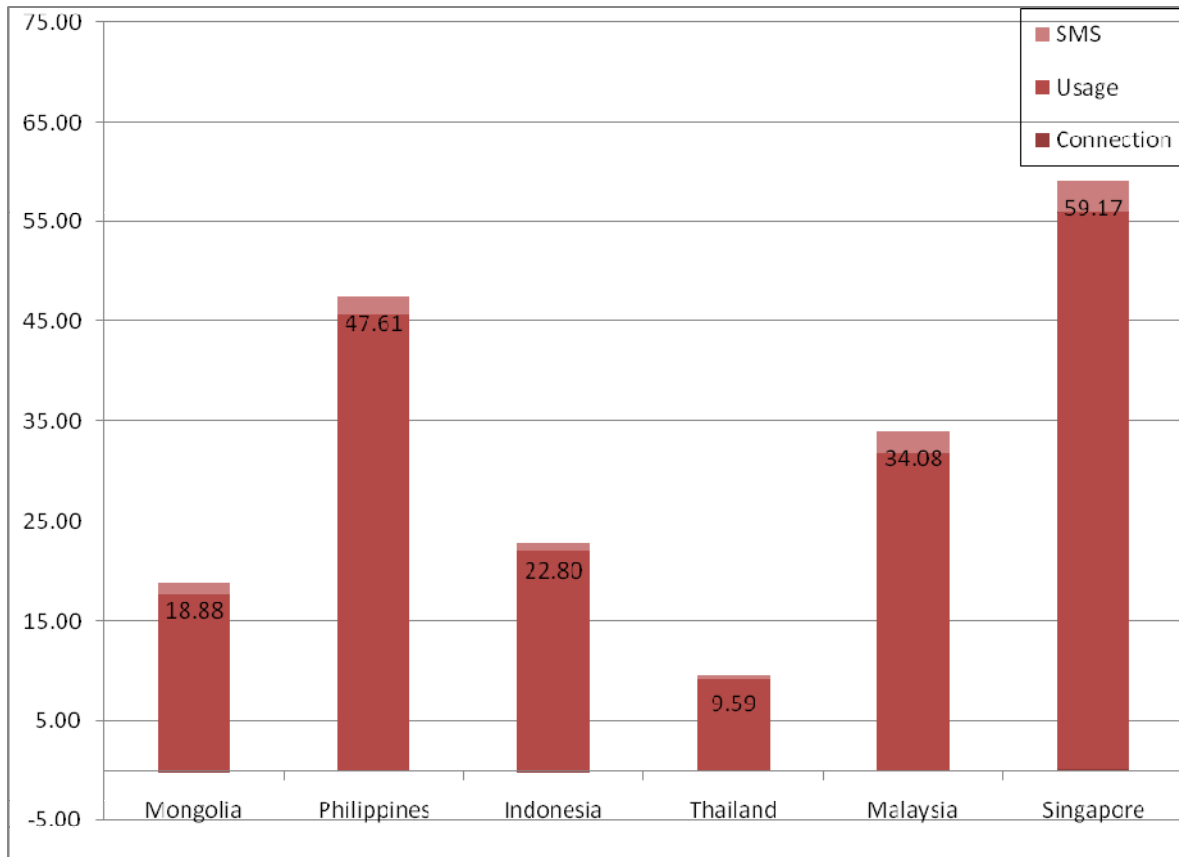
Average monthly prepaid mobile cost for a Low User, USD



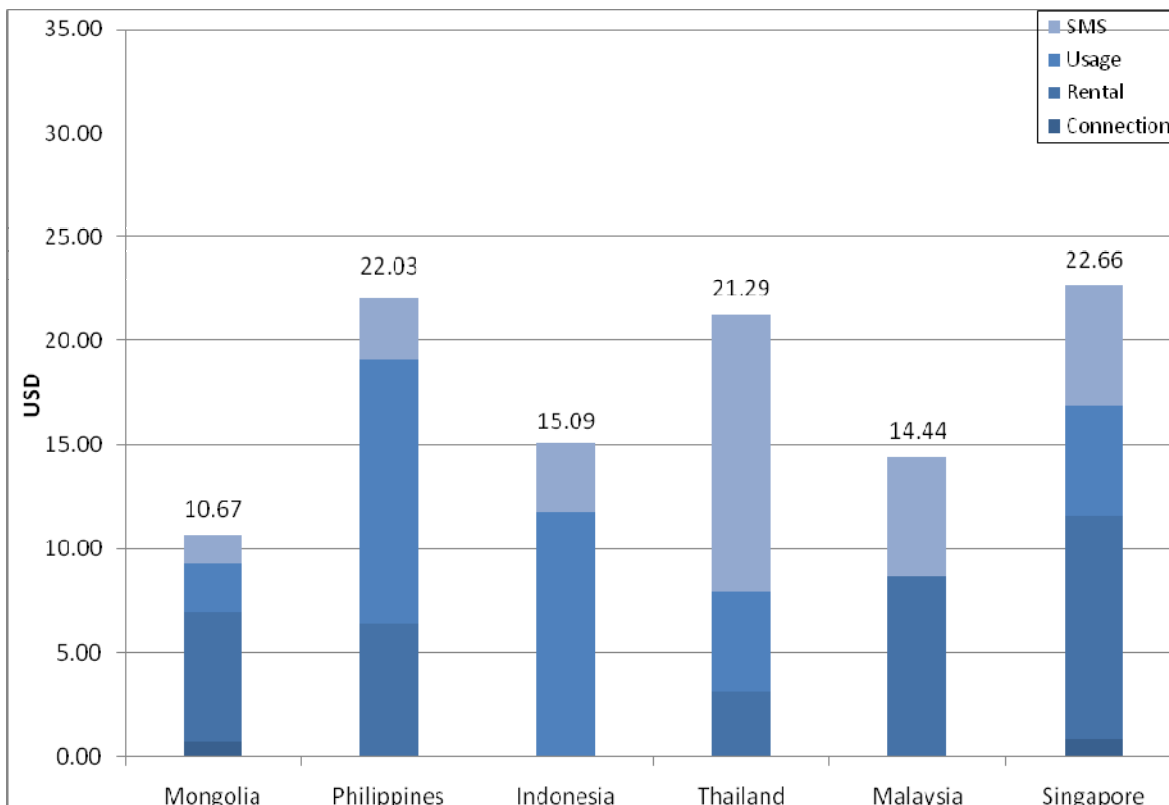
Average monthly prepaid mobile cost for a Medium User, USD



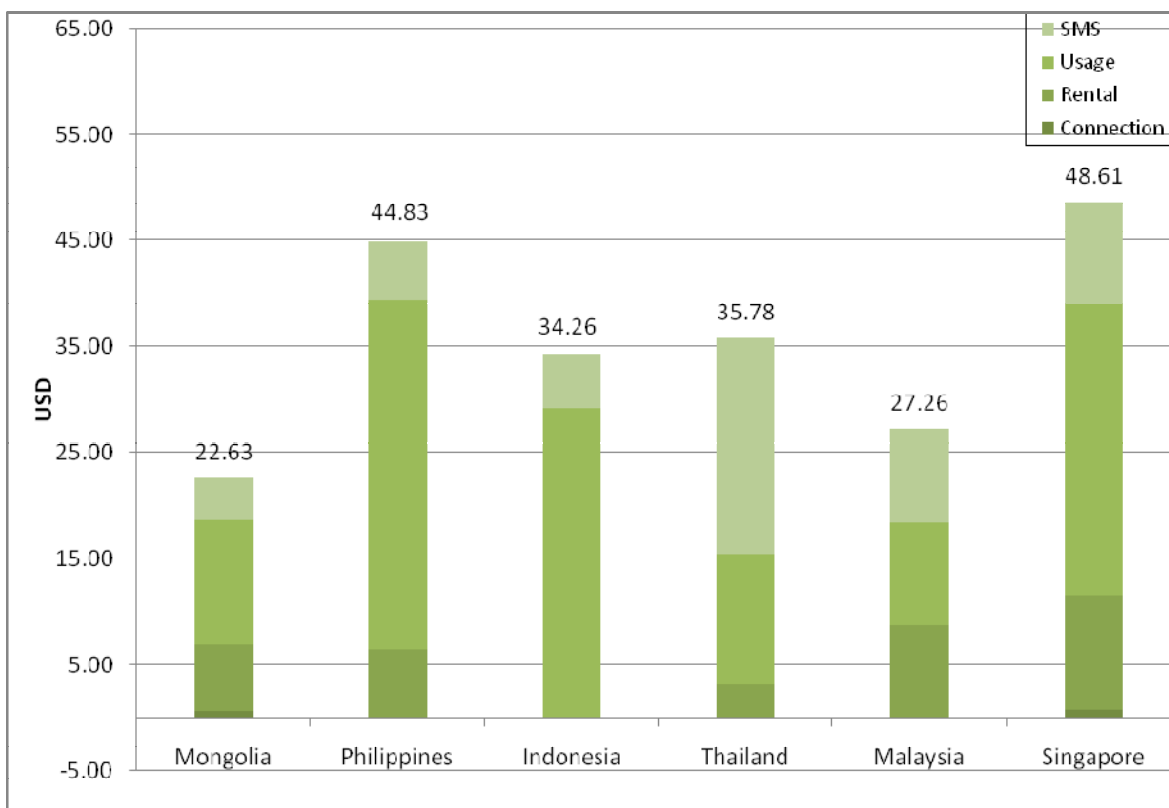
Average monthly prepaid mobile cost for a High User, USD



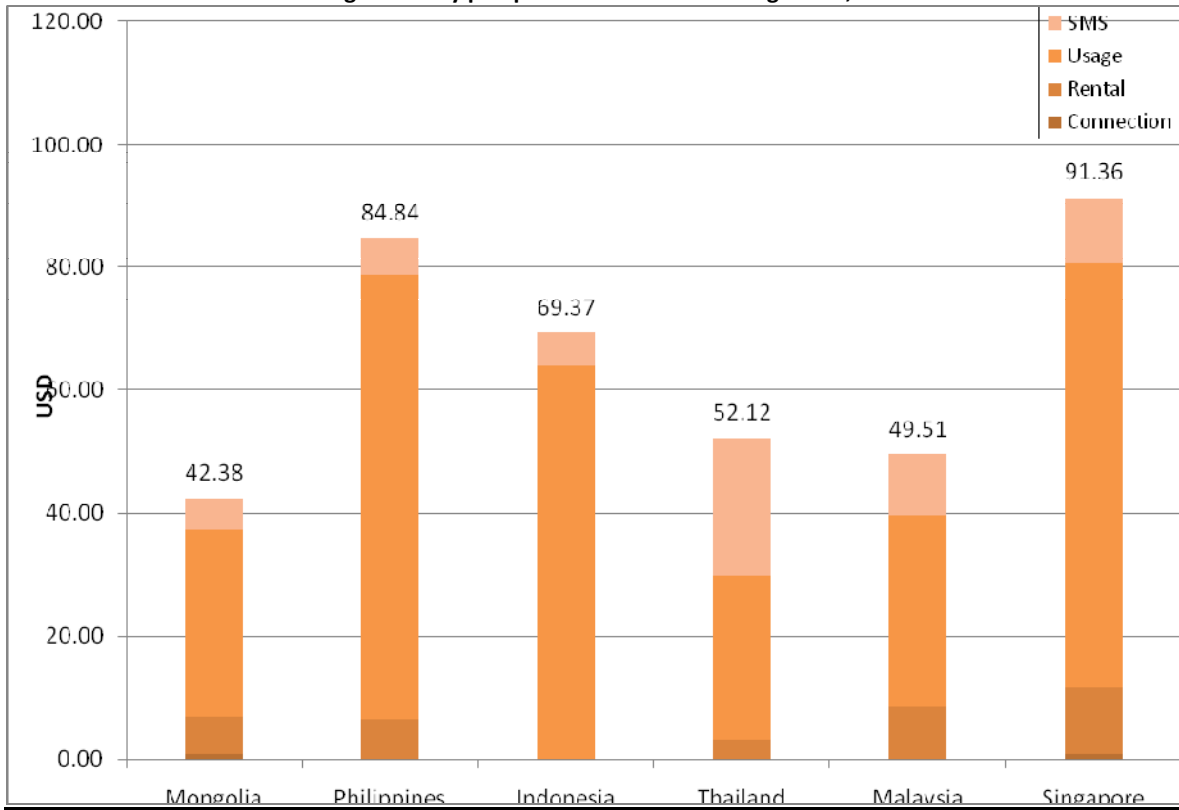
Average monthly postpaid mobile cost for a Low User, USD



Average monthly postpaid mobile cost for a Medium User, USD

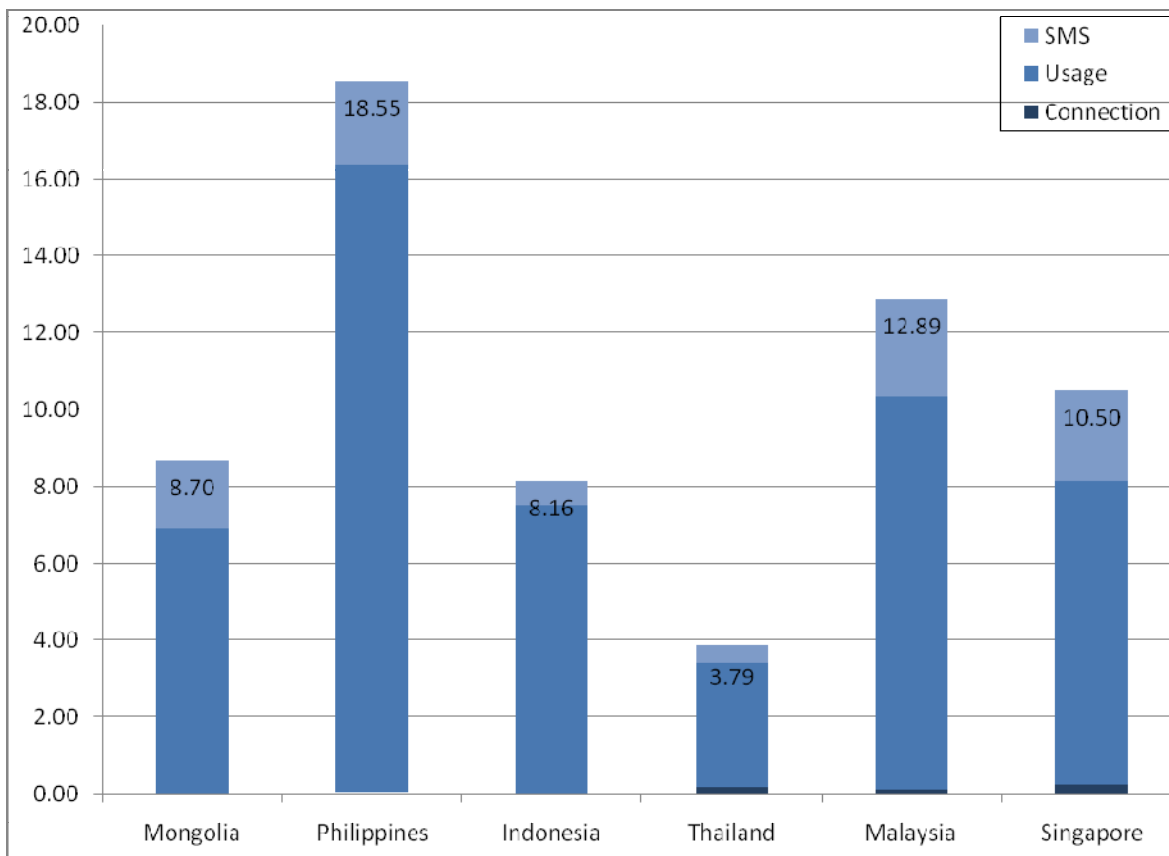


Average monthly postpaid mobile cost for a High User, USD

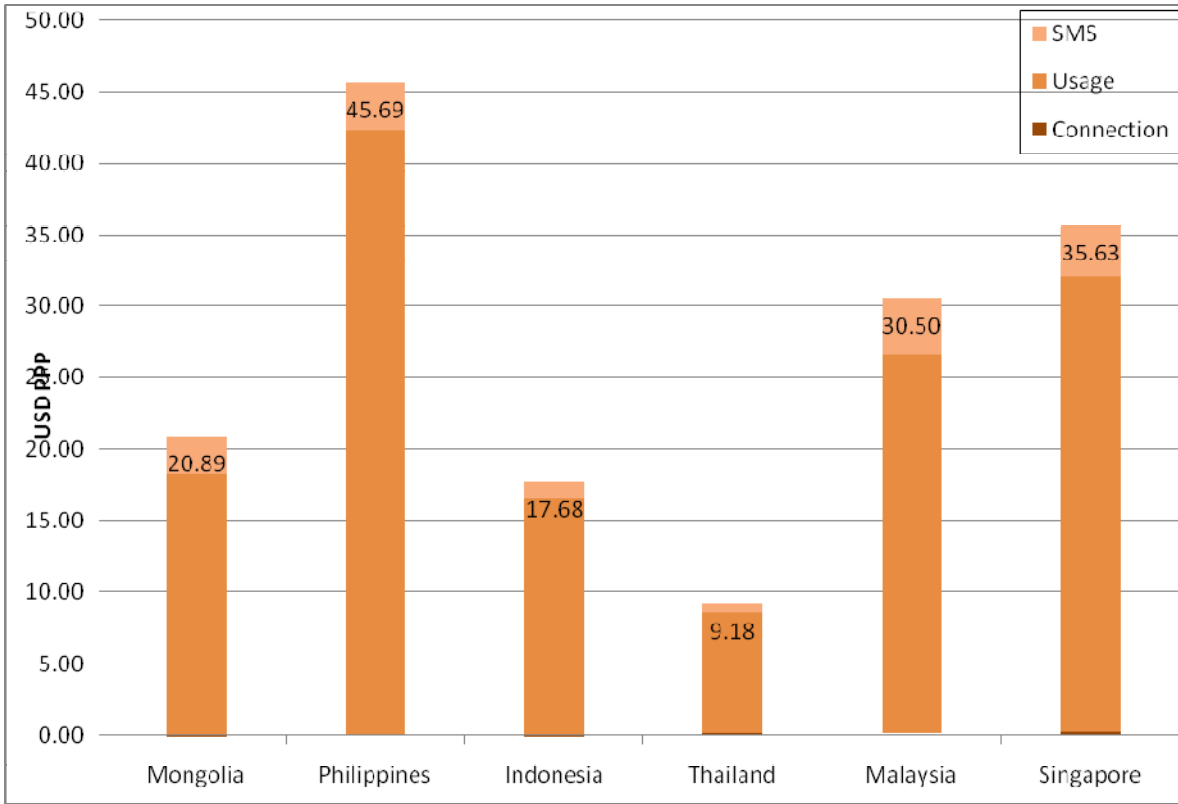


## Mobile price baskets (USD PPP)

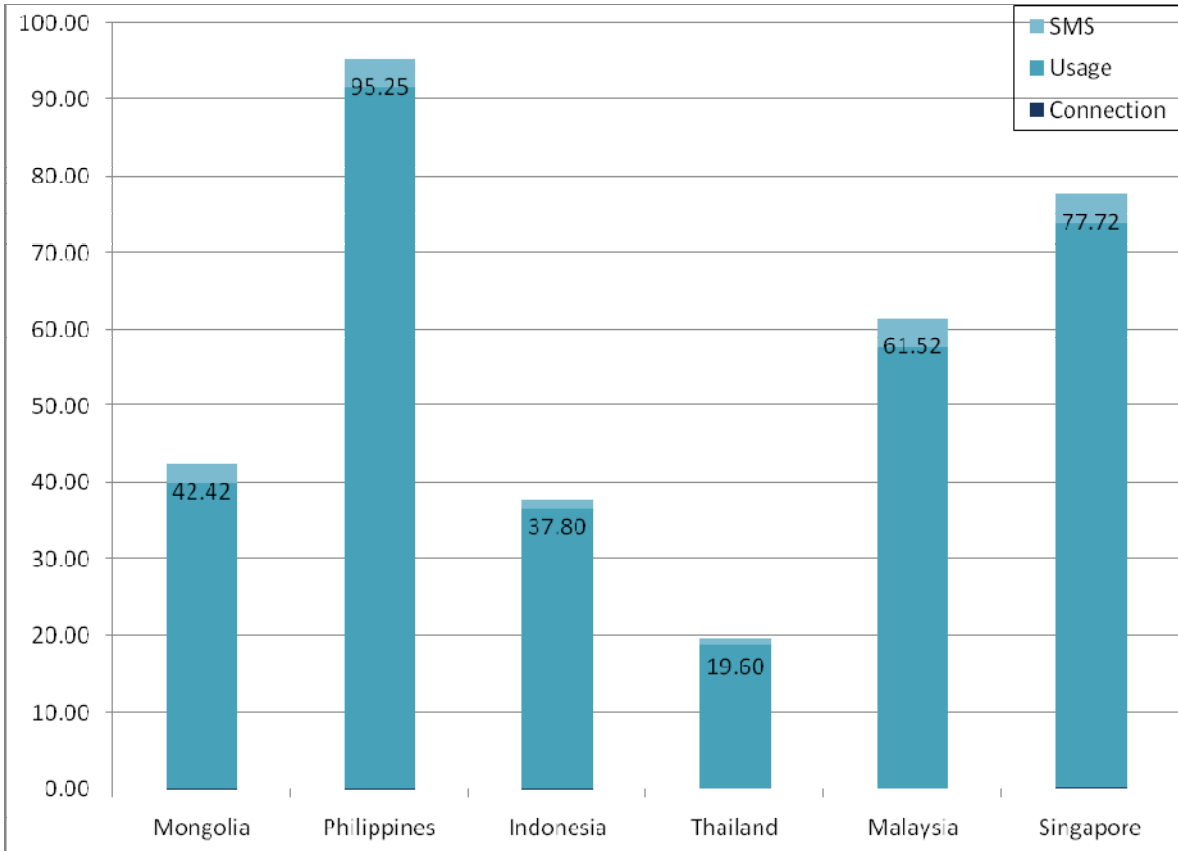
Average prepaid monthly mobile cost for a Low User, USD PPP



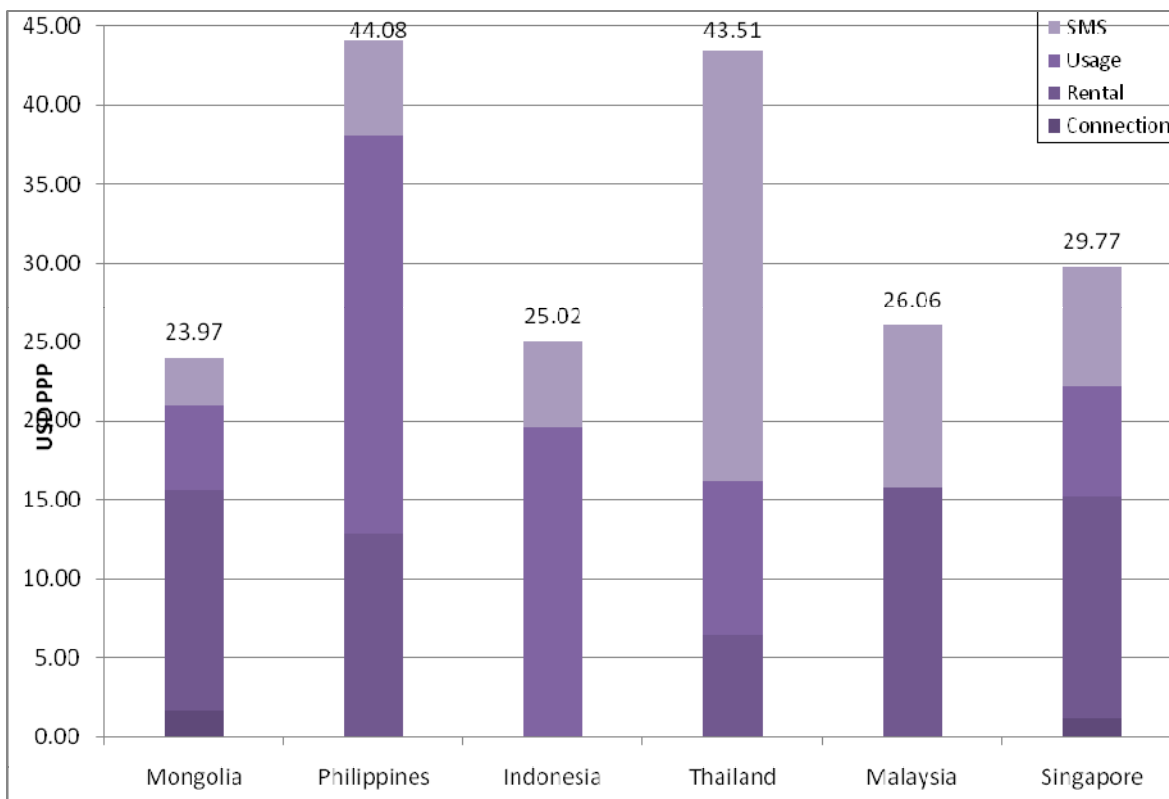
Average prepaid monthly mobile cost for a Medium User, USD PPP



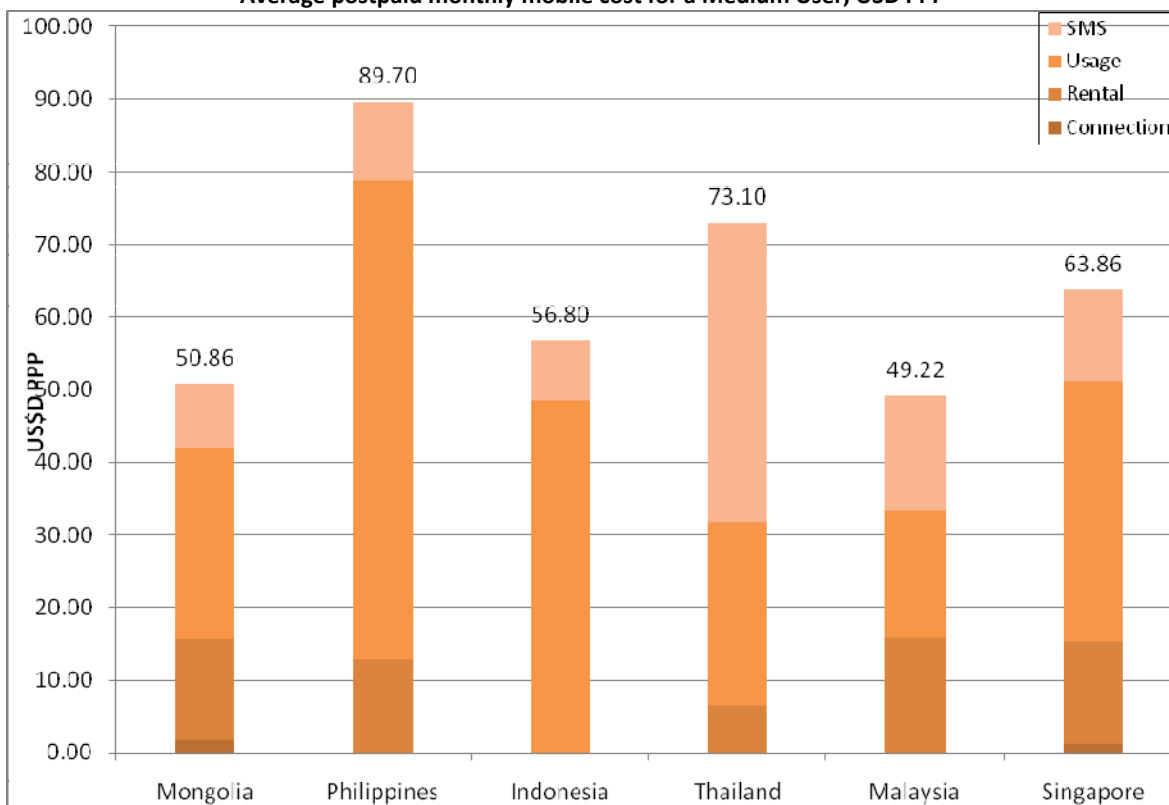
Average prepaid monthly mobile cost for a High User, USD PPP



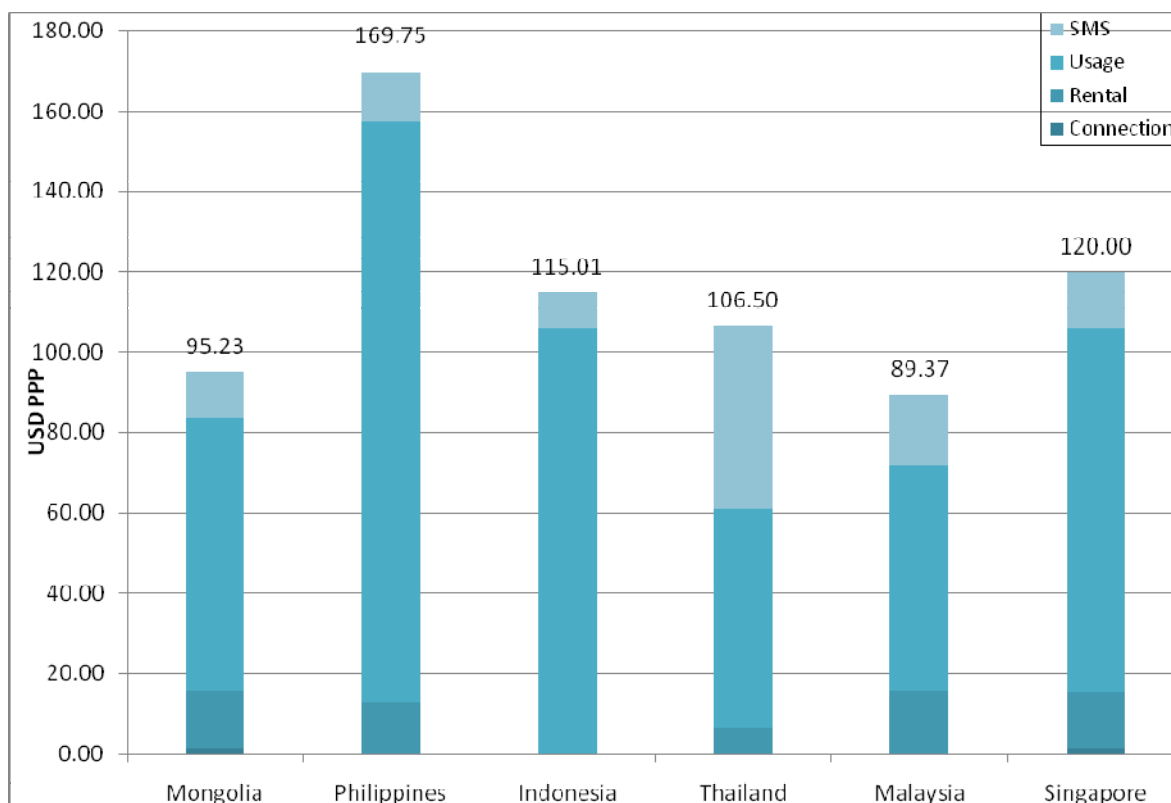
Average postpaid monthly mobile cost for a Low User, USD PPP



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, June 2009) Malaysia (Celcom, June 2009), Philippines (SMART, June 2009), Thailand (AIS, June 2009 and Singapore (SingTel, June 2009) and SMS data from Indonesia (Telkomsel, June 2009) and the Philippines (SMART<sup>1</sup> June 2009) Tariff data was based on data for October 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 October 2009 are taken from: <http://www.oanda.com/>
7. USD PPP estimates for 2008 taken from the IMF World Economic Outlook (WEO) Database (October 2009), available at: <http://www.imf.org/external/pubs/ft/weo/2009/02/weodata/index.aspx>

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

## MOBILE PRICE BASKETS (OCTOBER 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:*

- a. The price of the handset and handset subsidies are **not** taken into account in the basket.
- b. 1/3 of the registration or installation charges (i.e. depreciated over 3 years) where applicable.
- c. Monthly rental charges and any optional charges that may apply to the package.
- d. The usage profile will also include a number of SMS messages per month.
- e. The three user baskets that are taken into consideration are:
  - *Low user basket*
  - *Medium user basket*
  - *High user basket*
- f. Different baskets were calculated for prepaid and postpaid plans.
- g. 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	55	129
Medium User	119	142	334
High User	256	306	721
SMS per month			
Low User	33	50	211
Medium User	50	76	320
High User	55	84	352

#### 2. *Call destination (in minutes):*

<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).

- a. 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.
- 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

<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.

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).<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. Mongolia - Mobicom
  - a. Prepaid – Be
  - b. Postpaid – Zone160
2. Philippines – SMART Communications
  - a. Prepaid – Smart Buddy
  - b. Postpaid – Smart Gold Lite 300
3. Indonesia - Telkomsel
  - a. Prepaid – Kartu As
  - b. Postpaid – Kartu Helo
4. Thailand – Advanced Info Service (AIS) Plc.
  - a. Prepaid – SIM One-2-call 99
  - b. Postpaid – GSM Net SIM 99
5. Malaysia – Maxis Communications

<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.

- a. Prepaid – New Hotlink Plan
  - b. Postpaid – Value First
6. Singapore – SingTel
- a. Prepaid – Hi Card
  - b. Postpaid – iOne Super Value



**Mobile tariff comparison**

				MONGOLIA	PHILIPPINES	INDONESIA	THAILAND	MALAYSIA	SINGAPORE
				Be	Smart Buddy	Kartu As	SIM One-2-Call 99	New Hotlink Plan	Hi card
<b>Connection Charges</b>				6.198	0.857	N/A	2.928	2.554	7.162
<b>Subscription (rental) fee</b>				N/A	N/A	N/A	N/A	N/A	0
<b>Free minutes (in local currency)</b>					N/A	N/A	N/A	1.161	N/A
<b>Usage charges</b>	Fixed	Incoming	Peak						0.115
			Off-peak	N/A	N/A	N/A	N/A	N/A	0.057
			Weekend						0.057
		Outgoing	Peak	0.069	0.161	0.083	0.030	0.113	0.115
			Off-peak	N/A	N/A	N/A	0.030	N/A	0.057
			Weekend	N/A	N/A	N/A	N/A	N/A	0.057
	On-net	Incoming	Peak						0.115
			Off-peak	N/A	N/A	N/A	N/A	N/A	0.057
			Weekend						0.057
		Outgoing	Peak	0.048	0.139	0.083	0.030	0.096	0.115
			Off-peak	N/A	N/A	N/A	0.004	N/A	0.057
			Weekend	N/A	N/A	N/A	N/A	N/A	0.057
	Off-net	Incoming	Peak						0.115
			Off-peak	N/A	N/A	N/A	N/A	N/A	0.057
			Weekend						0.057
Outgoing		Peak	0.069	0.161	0.083	0.030	0.113	0.115	
		Off-peak	N/A	N/A	N/A	0.030	N/A	0.057	
		Weekend	N/A	N/A	N/A	N/A	N/A	0.057	
<b>Free SMSs</b>				N/A	N/A	500	N/A	N/A	N/A
<b>SMS charges</b>	Basic charge			N/A	0.021	0.011	0.005	N/A	0.036
	On-net			0.010	N/A	N/A	N/A	0.020	N/A
	Off-net			0.028	N/A	N/A	N/A	0.044	N/A
<b>Exchange rate: USD 1 =</b>				1451.980	46.672	9425.070	33.810	3.446	1.396
				MNT	PHP	IDR	THB	MYR	SGD
<b>Source</b>				<a href="http://www.oanda.com/">http://www.oanda.com/</a>					

POST-PAID	MONGOLIA	PHILIPPINES	INDONESIA	THAILAND (AIS)	MALAYSIA	SINGAPORE	
	Zone160	Smart Gold Lite 300	Kartu Helo	GSM Net SIM 99	Value First	iOne Super Value	
			Local	National			
<b>Connection Charges</b>	26.171	N/A	0.000		0.000	N/A	30.652

<b>Subscription (rental) fee</b>			6.198	6.428	0.000		2.928	0.003	10.742	
<b>Free minutes (in minutes)</b>			N/A	N/A	N/A		N/A	N/A	80	
<b>Free minutes (in value)</b>			6.198					0.003		
<b>Usage charges</b>	Fixed	Incoming	Peak	N/A	N/A	N/A		N/A	N/A	0.000
			Off-peak							
			Weekend							
			Other							
	Outgoing	Peak	0.062	0.164	0.069	0.095	0.037	0.058	0.107	
		Off-peak		N/A	N/A		N/A	N/A	N/A	
		Weekend		N/A	N/A		N/A	N/A	N/A	
	On-net	Incoming	Peak	N/A	N/A	N/A		N/A	N/A	0.000
			Off-peak							
			Weekend							
			Other							
	Outgoing	Peak	0.038	0.043	0.069	0.090	0.037	0.052	0.107	
		Off-peak		N/A	N/A		N/A	N/A	N/A	
		Weekend		N/A	N/A		N/A	N/A	N/A	
	Off-net	Incoming	Peak	N/A	N/A	N/A		N/A	N/A	0.000
Off-peak										
Weekend										
Other										
Outgoing	Peak	0.062	0.164	0.069	0.127	0.037	0.058	0.107		
	Off-peak		N/A	N/A		N/A	N/A	N/A		
	Weekend		N/A	N/A		N/A	N/A	N/A		
<b>Free SMSs</b>			N/A	75	N/A		N/A	500	50	
<b>SMS charges</b>			Basic charge		N/A		0.059	N/A	0.036	
			On-net		0.013		N/A		0.029	N/A
			Off-net		0.025		0.016		N/A	0.029
<b>Exchange rate: USD 1 =</b>			1,451.98	46.672	9425.070		33.810	3.446	1.396	
			MNT	PHP	IDR		THB	MYR	SGD	
<b>Source</b>			<a href="http://www.oanda.com/">http://www.oanda.com/</a>							