

Proposal for revising the ICT Price Basket methodology

Submitted by the sub-group on revision of the ICT price sub-baskets

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Table of Contents

1. Background to proposal for revising the ICT price baskets	3
2. Objective & Scope of the assignment.....	3
3. Data at a glance	4
4. Recommendations	5
4.1. Recommendations related to mobile-cellular prices.....	6
4.2. Recommendations related to mobile-broadband prices.....	9
4.3. Recommendations related to fixed-broadband prices.....	10
5. Conclusion	11
Acknowledgements.....	12

1. Background to proposal for revising the ICT price baskets

The 7th Meeting of the ITU Expert Group on Telecommunication / ICT Indicators (EGTI), which took place in Geneva, Switzerland, on 4-5 October 2016, agreed to create a sub-group within EGTI to develop a concrete proposal for revising the ICT price baskets (IPB) in order to adapt them to evolving consumption patterns. Currently, ITU collects data on the price of four ICT services: fixed telephone, mobile cellular (voice and SMS), mobile broadband and fixed broadband. Prices are collected from the dominant operator in each segment, for the entry-level tariff meeting a set of common [criteria](#)¹ to ensure international comparability. Prices for each service are combined into a basket reflecting a given monthly usage and presented in USD, PPP\$ and as a % of GNI p.c. The current mobile-cellular basket is based on the Organisation for Economic Co-operation and Development (OECD) low-user basket. However, this mobile-cellular basket was designed specifically based on patterns of use within the OECD countries and was designed at a time when Internet access via the mobile phone was not as wide spread as it is today. In view of the foregoing, there is a need to review the current methodology for the IPB to, among other considerations (a) align it with patterns of use that is more representative, to the extent possible, of all ITU member states; (b) reflect current access and usage pattern of services.

In re-assessing the need for change of the IPB methodology, it is noteworthy that the focus of the sub-group from the onset was **to base its recommendations on evidence**. As such, all efforts were made to gather data, to the extent possible, to understand current consumption patterns. The sub-group also subjected its initial proposals and findings to discussion on the online forum prior to finalizing its concrete proposal. In constructing the recommendations for the revision of the IPB it is important to note that **due consideration was given to the resource-intensive exercise of data collection that follows each year**.

2. Objective & Scope of the assignment

The primary objective of the assignment was for the sub group to develop a concrete proposal for revising the IPB in order to adapt the methodology and scope of the price baskets to existing/current consumption patterns.

The sub-baskets included in this proposal are based on the current composition of the IPB and are outlined below:

1. Mobile cellular
2. Mobile broadband
 - 2.1. Handset based (500 MB data cap) prepaid
 - 2.2. USB dongle based (1 GB) postpaid
3. Fixed broadband and fixed telephony

¹ http://www.itu.int/en/ITU-D/Statistics/Documents/datacollection/IPB_rules_Feb_2016.pdf

3. Data at a glance

The subgroup gathered consumption data for countries across all the region of the world to establish the current consumption patterns for ICT services. A noteworthy observation was that a number of regulatory bodies do not publish their data on websites. This presented challenges on the extent of coverage. However, other sources of data were explored including the ITU database to establish the consumption pattern in a number of countries.

Error! Reference source not found. is a summary of the data collected by the EGTI sub-group for the purpose of reviewing the ICT price baskets. All ITU regions within each income classification are represented with the exception of the low-income group. Most low-income countries are in Africa and Asia and the Pacific. The exceptions are three member states belonging to the Americas (Haiti) and the Arab States (Comoros and Somali), for which we do not have any data points. In analyzing both mean and median values for voice (minutes of use per month), SMS per month and data (GB per month), two groups of consumption emerge. There is a clear disparity in terms of consumption patterns, within the data at hand, among the low-income group and the lower-middle, upper-middle and high-income groups. As such, the evidence suggests two consumption patterns ought to be considered.

Table 1: Summary of data collected

		Voice (mins/month)	SMS (SMS/month)	Data (GB/month)	ITU Regions represented
Low income	Data points	13	16	2	Africa, Asia Pacific*
	Mean	81	22	0.26	
	Median	56	12	0.26	
Lower middle income	Data points	27	18	16	Africa, Asia Pacific, Arab States, the Americas, CIS
	Mean	156	68	1.7	
	Median	125	20	0.5	
Upper middle income	Data points	29	26	19	Africa, Asia Pacific, Arab States, the Americas, CIS, Europe
	Mean	159	56	1.27	
	Median	147	46	0.9	
High income	Data points	40	36	29	Africa, Asia Pacific, Arab States, the Americas, CIS, Europe
	Mean	157	95	2.2	
	Median	139	49	1.9	

* Most low-income countries are in Africa and Asia and the Pacific. Only two countries in the Arab States (Comoros and Somalia) and one in the Americas (Haiti) fall in the low-income group. We do not have data for these three member states.

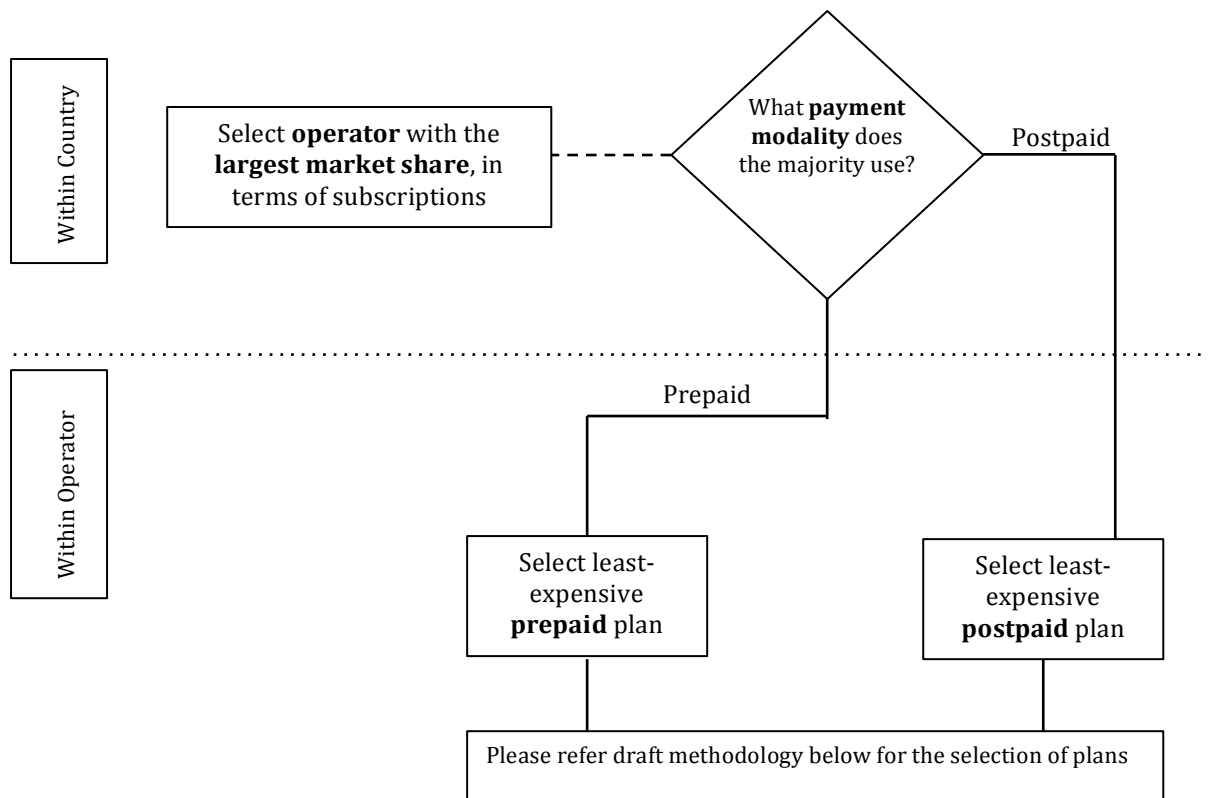
4. Recommendations

The recommendations in this section are based on the consumption patterns established from the data collected by the sub group, which is presented in the preceding section, and the subsequent analysis.

The subgroup leveraged on the current approach adopted by ITU in selecting which services to be considered in the basket which is: identify the most commonly used service and then within that the most economical. Specifically, Figure 1 illustrates the recommended process flow for the mobile cellular sub-basket, where first the operator with the majority market share is selected and then the payment modality that best represents the majority of mobile users in each member state. Once these are established, the least expensive plan is selected within prepaid or postpaid (based on whichever payment modality has the larger subscription base).

Ideally, this would result in a fair balance between representing the majority in terms of number of subscribers and affordability, while maintaining practicality of data collection.

Figure 1: Recommended process flow, mobile cellular



4.1. Recommendations related to mobile-cellular prices

The major changes proposed are itemized below:

- i. Increased prepaid threshold to give countries the opportunity of reporting price data based on majority of their respective subscribers
- ii. The inclusion of two consumption baskets (low and high)
 - o Low consumption basket: Voice 70 mins + 20 SMS + 500 MB data
 - o High consumption basket: Voice 140 mins + 70 SMS + 1.5 GB data
- iii. The inclusion of mobile broadband (data)

The rationale behind each of the proposed changes to the mobile cellular segment is presented in Table 2 below:

Table 2: Proposed revisions to the mobile-cellular price basket

	Current ITU Basket	Proposed revision	Rationale
Operator	Operator with the highest market share (in terms of subscriptions)	No change	N/A
Type of subscription	Prepaid Exception: Postpaid if prepaid subscription base < 2% (e.g. Japan)	Prepaid if prepaid subscription base > 50%; Postpaid* if postpaid subscription base > 50% Exception: Prepaid to be selected by default in instances where the number of subscribers for payment modality is unknown. * If a contract with the operator is mandatory a maximum contract period of 1 year is to be selected	Countries ought to report on the type of service that represents the majority in their respective markets. If data on subscriber numbers for prepaid – postpaid modalities are not available, prepaid is selected by default because it is the predominant contract type worldwide.
Plan	Least expensive that meets the criteria	No change (In principle, the least cost plan will <i>not</i> include any subsidies for handsets)	N/A
Voice	30 calls equating to approximately 50.9 mins	It is proposed to have two consumption baskets. Low: 70 mins High: 140 mins If mobile bundles** are	The disparity in consumption patterns across countries was evident. Further analysis of data indicated a natural grouping based on

		the cheaper option (as opposed to single-play) the <i>minimum</i> number of minutes as above must be included in the selected bundle.	national income categories (World Bank).
Distribution based on destination	On-net 56% Off-net 26% To fixed 17%	On-net 67% Off-net 26% To fixed 7%	The distribution seen from the evidence was roughly the same across the board. Therefore, the proposed distribution is applicable for both consumption baskets.
Distribution based on time of day	Peak Off-peak Weekend pricing	No time of day distinction is made Exception: Average of peak + off peak*** price if time of day pricing is advertised	The evidence confirms the majority does not offer differential tariffs based on time of day. However, there are a few that do, and in such cases the average of both price points will be used.
SMS	100 SMS	Low consumption basket: 20 SMS High consumption basket: 70 SMS	With the inclusion of data, the natural trend from the evidence is a decline in SMS use.
Distribution based on destination	On-net 50% Off-net 50%	No Change	N/A
Data****	N/A	The least expensive data add-on with the following data caps at <i>minimum</i> : Low consumption basket: 500 MB High consumption basket: 1.5 GB	As per the evidence gathered on data consumption it is recommended that data is included in the sub-basket. However, unlike voice and SMS it is a service that has a steep upward trend. ²

² For example see: CISCO. 2017. Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2016–2021 White Paper. Available at:

		Note: Access is to the open public Internet. Any zero-rated plans or those with geographic limitations must not be selected, even if cheaper.	As such the consumption baskets need to be revised periodically.
Validity	30 days	No change	N/A

** A mobile bundle is defined as, *an offer that includes two or more services (mobile voice, SMS, mobile broadband) that is marketed as a single offer with a single price plan and a single invoice, subscribed under conditions that cannot be obtained by adding single play offers together.*

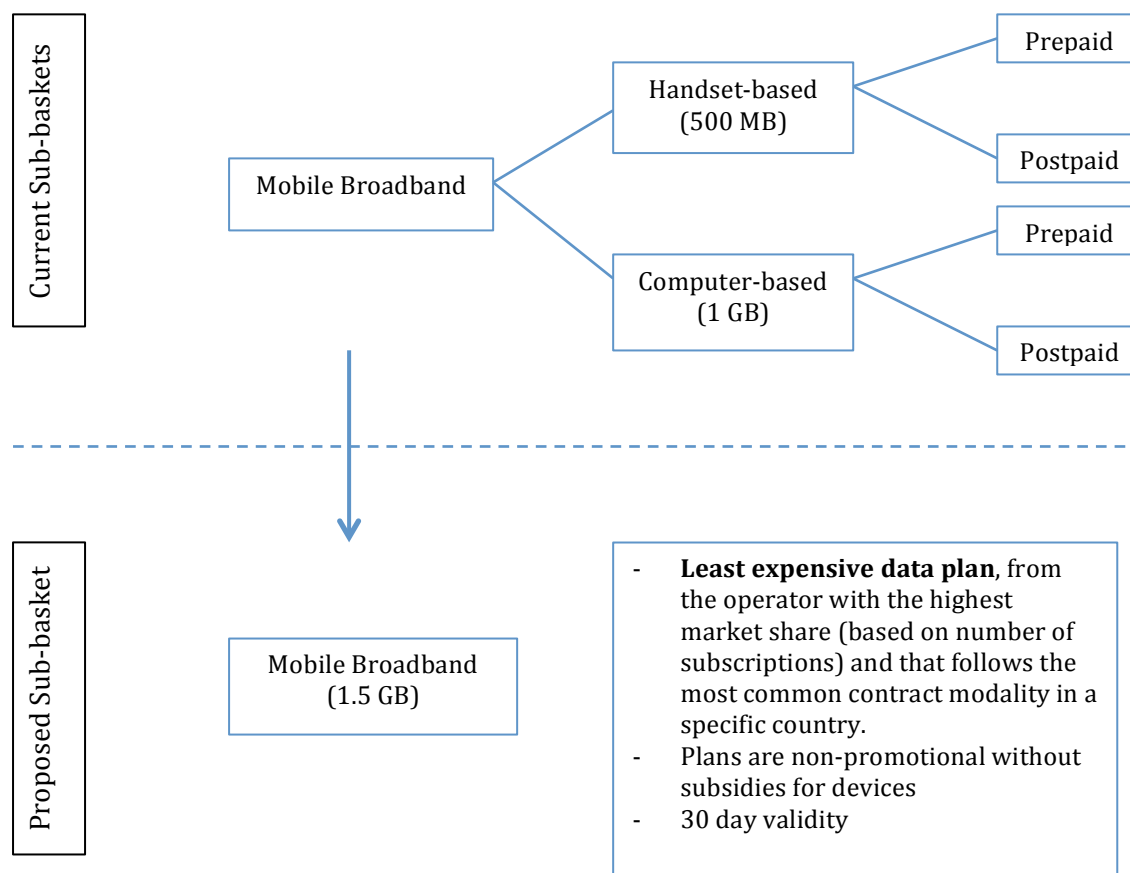
*** Peak prices are the most expensive on offer, and off-peak are considered the least expensive on offer before midnight.

**** As data consumption becomes ubiquitous and grows tremendously it is strongly recommended that the data cap recommended in 2017 is revised in 2019 (at least).

4.2. Recommendations related to mobile-broadband prices

Mobile data consumption is included in the recommended mobile cellular sub-basket (see 4.1 and Figure 2). However, the subgroup recommends maintaining a data-only / mobile broadband sub-basket. Based on past IPB data collections and evidence collected by the sub-group, it was observed that while there are some operators who do offer device-based plans for mobile broadband, the majority do not offer such plans. Therefore, the sub group proposes that the current mobile broadband sub-baskets are replaced with one data plan without special consideration to the device used to access the data services (see Figure 2).

Figure 2: The proposed changes to the existing mobile-broadband basket



The subgroup noted the fact that consumption patterns and tariffs differ from handset- to dongle-based plans in some countries. However, in the majority of the countries considered, it was established that there is no difference in pricing and customers can insert the SIM card (with the plan selected) in the device of their choice. In view of the foregoing, it was recommended that there should not be any device distinction made and that the least expensive plan should be selected. This would ensure that no member countries are disadvantaged in any way.

The sub-group also established that the majority of operators do not advertise speeds and in most cases the advertised speed is often just the device capability. As such there

is little value in collecting data on advertised mobile-broadband speeds. It is recommended to continue collecting data on the underlying mobile-broadband technology (e.g. UMTS, HSPA, LTE, LTE-Advanced, etc.) that will provide some indication on the availability of mobile broadband technologies in member states. Ideally quality indicators will be included; however, this is for discussion on future work within the EGTI and is considered out of scope within this document.

4.3. Recommendations related to fixed-broadband prices

During the evidence-gathering phase, the sub-group found that although bundled service offers are common in developed markets, in developing economies the services are offered on single-play basis. Therefore, it was recommended that fixed voice and fixed broadband remain as two standalone sub-baskets. In the future, as more countries begin to provide such double play offers, especially in the developing world, this sub-component could be revisited.

It is recommended that the need for the continuation of the Fixed Telephony sub-basket is discussed and deliberated at the EGTI meeting in September 2017. The sub-group was of the view that fixed telephony was a declining technology in its traditional sense globally. Therefore, its inclusion in the IPB was not well justified as it was not reflective of current trends in telecommunication consumption patterns.

In some markets that have a mature dual-play market, fixed bundles may be the least expensive option as opposed to stand-alone fixed broadband. In such cases it is recommended that the fixed bundle offer is used for the fixed broadband sub-basket (the minimum data allocation as below is to be maintained).

The subgroup proposed that the inclusion of line rent be discussed during EGTI meeting as this is sometimes a component of the cost of fixed-broadband services.. The rationale stems from the fact that fixed broadband cannot operate without a fixed-line connection, and that inherently causes dependability on the fixed network.

The current 1GB data cap on fixed broadband was deemed too low by the sub-group. The sub-group recommends to increase the fixed broadband data cap to 5 GB.³

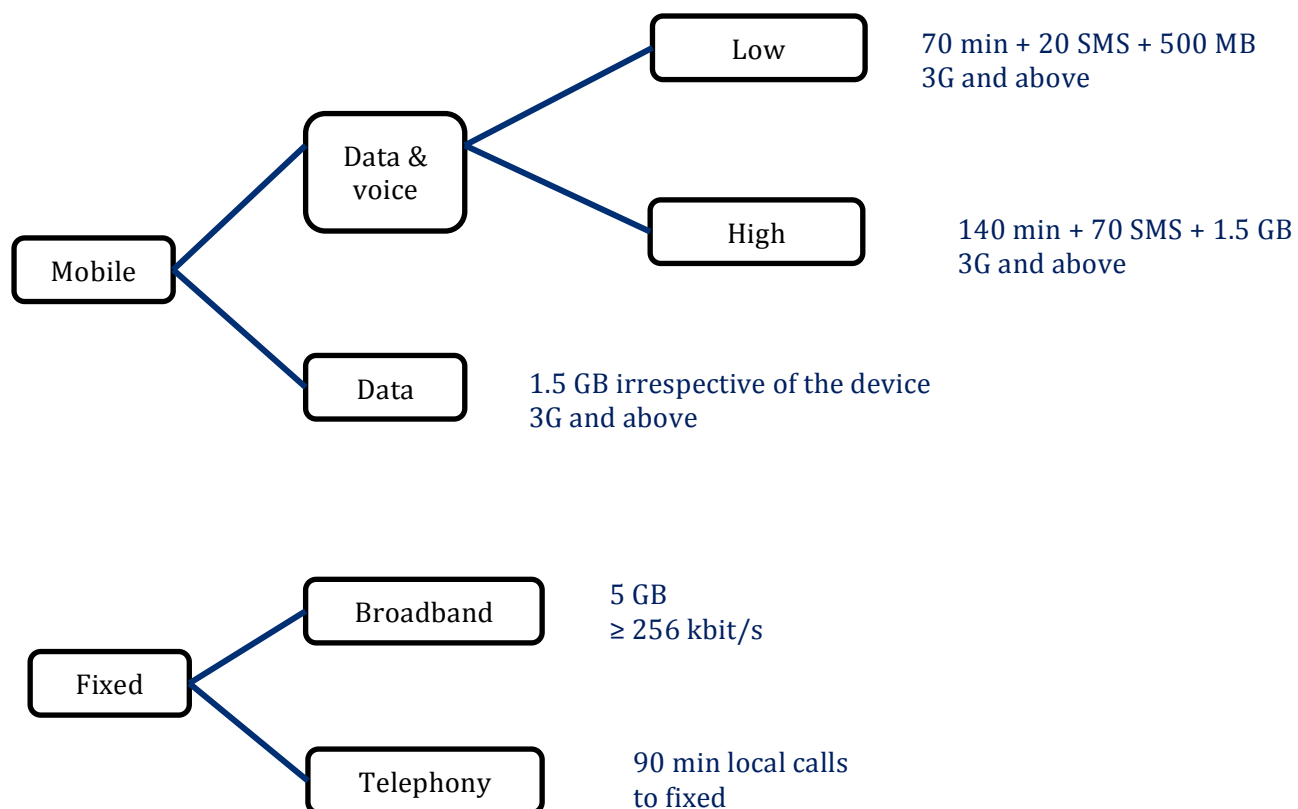
³ This recommendation is based on the analysis of supply-side data from the ITU (2015).

5. Conclusion

The rapidly evolving dynamics on the market as well as innovative pricing strategies by operators account for the need for the IPB to be reviewed and possibly revised regularly. The proposals presented in this paper are aimed at aligning the IPB to existing consumption patterns as well as reflecting the current pricing frameworks that are widely adopted in countries.

Figure 3 below provides an overview of the main characteristics of the proposed revisions to the current IPB:

Figure 3: Summary of the revised ICT Price Baskets



Acknowledgements

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