

difference between the 2006 and the 2010 mobile basket definition is the range of operators to include. The 2006 definition included dominant operators that together have 50% market share. The 2010 definition includes the two largest operators. Those countries with just two licensed operators would automatically include all operators.

Generally, the basket methodology has strengths and weaknesses. Strengths include the ability to compare products of an operator, comparing cheapest products of operators and comparing cheapest products available in a county. This allows benchmarking of countries, operators and products. The basket methodology applied consistently allows consumers to compare products of an operator and between operators. The weaknesses include:

- The OECD methodology of 2006 only includes dominant operators, the 2010 baskets only the two largest operators. Price changes following regulatory interventions would mainly be expected from small operators that attempt to gain market share through lower prices. On the other hand, dominant operators reflect what people actually pay better than comparing the cheapest product available in a country.
- OECD baskets do not take into account the number of people on each package and actual minutes of use for each package. No one is average and actual consumption patterns of an individual might only poorly be reflected. An alternative would be web-based tariff calculators that all users to input their actual consumption patterns.
- The same basket is used for all operators while subscribers of smaller operators are likely to have a different off-net/on-net ratio compared to larger operators.

Table 1: OECD mobile basket Definition 2006: Monthly call distribution, minutes and SMS				
Destination	Time	Low	Medium	High
Fixed	Peak	4.75	12.29	28.56
	Off Peak	2.48	5.90	9.04
	Off Off Peak	2.67	6.39	10.00
On-Net	Peak	11.98	31.80	80.60
	Off Peak	6.24	15.26	25.52
	Off Off Peak	6.74	16.54	28.21
Off-net	Peak	5.24	15.19	44.60
	Off Peak	2.73	7.29	14.12
	Off Off Peak	2.95	7.90	15.61
SMS On-Net		21.45	32.50	35.75
SMS OFF-Net		11.55	17.50	19.25

Compensating for some of the weaknesses this paper applies the basket methodology and adjusting to the complexity of Indonesian retail pricing, the authors have developed a own price basket which will be discussed in the next section.

The Rohman-Stork Price Basket

The Rohman-Stork index was developed to unlock these complexities and to allow a comparison of all products to establish price transparency. The new index allows to track prices changes and monitor the consequences of regulatory interventions. Instead of monthly or annual baskets a daily basket has been developed for Indonesia to account for time of the day discounts and accumulated discounts.

Another modification compared to the OECD methodology is that all prepaid products from all operators are considered not just dominant operators. This allows better to reflect competitive pressure in the

industry and indicate which operators react in which way to regulatory interventions. The basket is defined as follows:

- All prepaid products are being priced for a basket constituting six calls each for every hour of the day and night (24 hours).
- The distribution of calls consists of three calls of the length 35 seconds, 75 seconds and 200 seconds to the same network. The call length was determined to best reflect the complexity of billing and free callings for a certain time period (30 seconds in most cases), or free calling after a required period (usually one minute).
- The calls are proportionally distributed between on-net and off-net.
- The daily basket also includes one off-net and one on-net SMS per hour.

The template of the scenarios are then translated into Excel sheet as shown in the following Table 2

Table 2: Rohman-Stork Price Basket								
	On-net call			Off-net Calls			SMS	
	35 sec	75 sec	200 sec	35 sec	75 sec	200 sec	On-net	Off-net
0 am-1 am	1	1	1	1	1	1	1	1
1 am-2 am	1	1	1	1	1	1	1	1
2 am-3 am	1	1	1	1	1	1	1	1
3 am-4 am	1	1	1	1	1	1	1	1
4 am-5 am	1	1	1	1	1	1	1	1
5 am-6 am	1	1	1	1	1	1	1	1
6 am-7 am	1	1	1	1	1	1	1	1
7 am-8 am	1	1	1	1	1	1	1	1
8 am-9 am	1	1	1	1	1	1	1	1
9 am-10 am	1	1	1	1	1	1	1	1
10 am-11 am	1	1	1	1	1	1	1	1
11 am-12 am	1	1	1	1	1	1	1	1
12 am -1 pm	1	1	1	1	1	1	1	1
1 pm-2 pm	1	1	1	1	1	1	1	1
2 pm-3 pm	1	1	1	1	1	1	1	1
3 pm-4 pm	1	1	1	1	1	1	1	1
4 pm-5 pm	1	1	1	1	1	1	1	1
5 pm-6 pm	1	1	1	1	1	1	1	1
6 pm-7 pm	1	1	1	1	1	1	1	1
7 pm-8 pm	1	1	1	1	1	1	1	1
8 pm-9 pm	1	1	1	1	1	1	1	1
9 pm-10 pm	1	1	1	1	1	1	1	1
10 pm-11 pm	1	1	1	1	1	1	1	1
11 pm-12 am	1	1	1	1	1	1	1	1

Figure 1 displays the cost of the Rohman-Stork usage basket for most prepaid product for all eight operators in Indonesia. As presented earlier, all operators have claimed in advance that their products are the cheapest or even stating that they offer a zero cost service.

From the figure 1 it can be seen that the range of price is quite wide from around USD 5.5 to nearly 40 USD. The price comparisons show that despite operators claiming that their product is the cheapest, or even free, this may be a huge misleading. There is no particular difference between large operators and small operators in pricing policy.

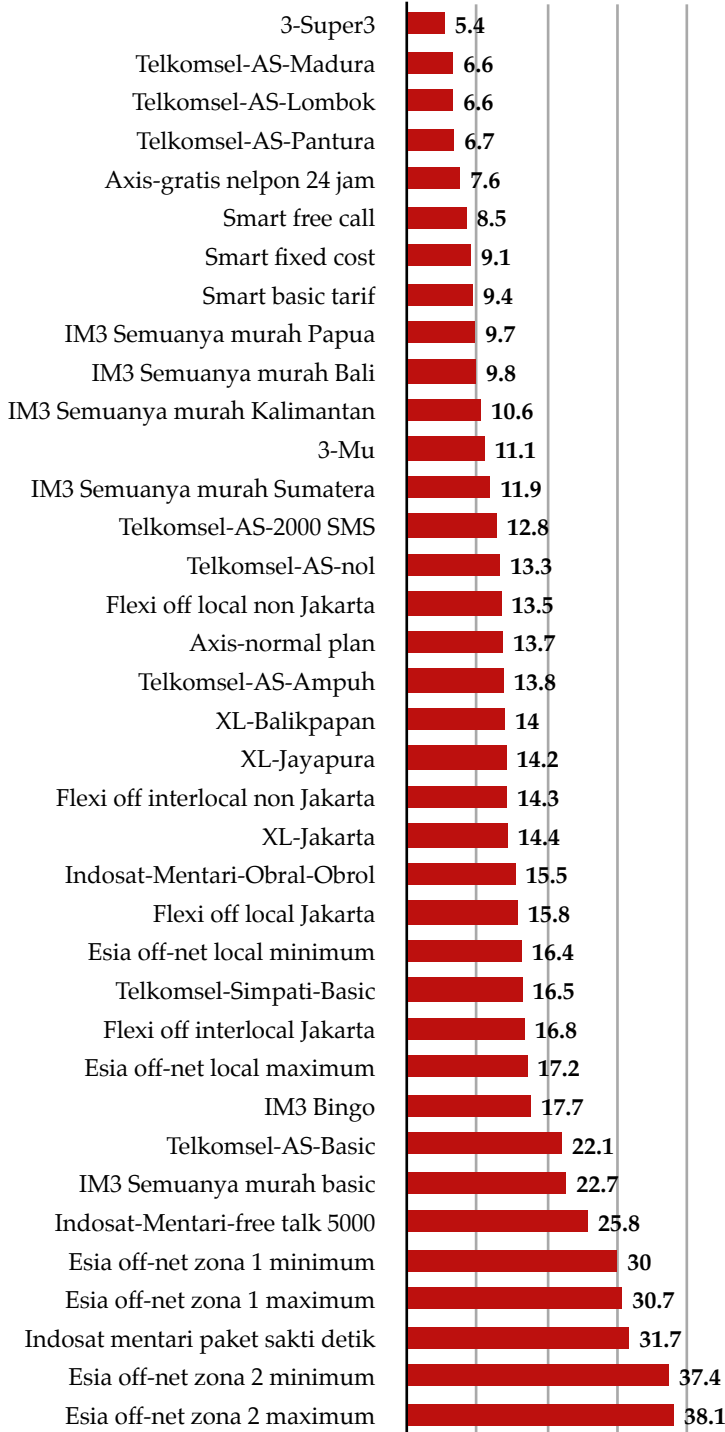


Figure 1: Price in USD for Rohman-Stork Usage Basket November 2011

The general conclusion can be derived that both, incumbent and new entrants, discriminate the price at different level. For instance, Indosat (the second largest operator) offers “Indosat Mentari paket sakti detik”, which according to the price basket, costs USD 31.7, but they also offer “IM3 semuanya murah Papua” which only costs USD 9.7 for the Rohman-Stork usage basket. It can be inferred that operators are aware of different price elasticity of demand based on regions. In Papua and Madura, for example, prices are cheaper but this coincides also with lower average per capita income.

Figure 2 displays the comparison of the cheapest products available from all eight operators for the Rohman-Stork usage basket. Hutchison 3 is clearly operator followed by Telkomsel and Axis. While Hutchison and Axis are smaller operators, Telkomsel is the dominant operator with nearly 50% market share.

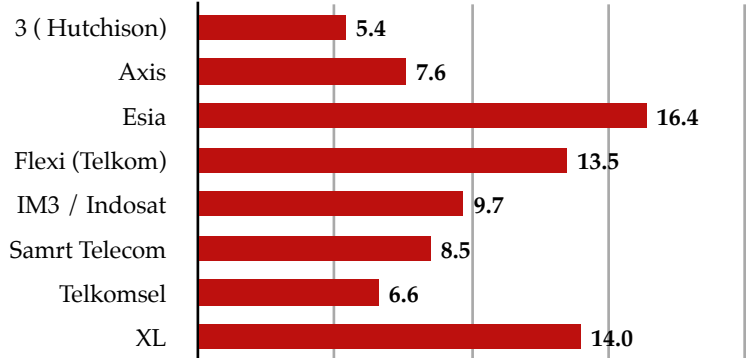


Figure 2: Cheapest product available from each operator for the Rohman-Stork Usage Basket in November 2011 in USD

Conclusion

Indonesia’s operators offer a wide range of different prepaid products with high differences in cost to consumers with some products costing as much as seven times that of the cheapest product available for the Rohman-Stork usage basket.

Requiring operators to cost a predefined user basket for each product and include this information in any advertisement would allow consumers to make better choices and lead to operators competing on prices more effectively, leading to lower prices in the medium to long run.

Under competitive price pressure some operators may choose to compete rather on quality of service or innovate other services, which is equally appreciated from a regulatory perspective.

In Kenya, Telkom Kenya Orange have deployed HSPA+, which gives subscribers high-speed wireless with download speeds of up to 21 Mbps. While Saficom build on it mobile money product MPESEA as a competitive advantage. MTC in Namibia offers among the first countries in Africa already 4G LTE services with up to 100 Mbps.

Indonesia’s Telecom Regulatory Body (BRTI) could, offer users an online tool that allows them to compare product prices for their actual usage, as has been done by regulatory authorities in Europe; for instance, in Sweden. Such a tool would also be able to factor in the network size because subscriber from large operators usually make more on-net and less off-net calls compared to subscribers of smaller operators.

This finding suggested the importance of price transparency to ensure that consumers are well-informed concerning the range of services and prices available. To do so, BRTI could use price baskets to create transparency and monitor price developments in the market. BRTI may even prescribe that any product advertisement would need to carry a public interest notice indicating the cost for a specific user basket, similar to cigarette advertisements having to mention potential harm caused by smoking. This would allow ordinary people, regardless of their education level, to make sense of product offerings.

Authors

Ibrahim Kholilul Rohman

Division of Technology & Society Chalmers University of Technology, Gothenburg, Sweden, Ibrahim.rohman@chalmers.se

Christoph Stork

Research ICT Africa, Cape Town, South Africa, cstork@researchictafrica.net