

Mobile Phone Services in Thailand Consumer Price Index

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Introduction

Nowadays, information technology development, particular in telecommunication, plays more important role in Thai consumption pattern and living style. Internet and mobile phone, for example, are developed and widely used. Competition in product design and development for the market is very high. Various forms of service charges, such as package price, pre-paid card, are launched as strategies to convince customers. Customers can chose any type of service charge according to their consumption levels. The price is frequently changed to compete for the market share, therefore, this price complexity requires an accurate price measurement.

This paper presents the problems of price collection on mobile phone and of methodology that is currently used in the mobile phone price case in Thailand.

The views expressed in this paper are solely those of the authors and do not necessarily reflect the policies of the Ministry of Commerce.

The Consumer Price Index, which is calculated by Trade and Economic Indexes Bureau (TEIB) , is based on the National Statistic Office (NSO)' s household expenditure survey as it is fundamental to the study of consumption expenditure trend, the calculation of the weight of goods and services of CPI and the selection of goods and services as price items.

From the latest survey of 1998, the consumption pattern in telecommunication has numerous changes which is shown in NSO's household expenditure survey between 1994 and 1998. The increase in expenditure of mobile phone has almost doubled in most of the regions of Thailand.

Average Monthly Expenditure For Goods and Service Other Than Food And Beverage by Region

Expenditure Group	1998					
	Region					
	Whole Kingdom.	Greater Bangkok	Central	North	Northeast	South
Percent of Households	100.00	17.50	19.30	19.70	31.00	12.50
All goods and Services	6468.24	13439.60	6654.08	5022.81	4165.63	5869.88
<u>Communications services</u>	183.37	523.39	184.41	126.57	71.03	144.30
- Telephone	138.23	351.36	142.32	104.77	63.56	116.07
- Packlink	43.49	166.96	41.38	20.69	4.27	27.34
- Membership and Internet Services	0.51	2.55	-	0.50	0.05	-
- Postage and telegraph	0.38	0.59	0.32	0.11	0.54	0.25
- Other communication: mobile phone	0.76	1.93	0.39	0.50	0.61	0.64
<u>Communication equipment</u>	5.45	16.42	5.98	3.60	2.31	2.31
- Telephone handset	1.16	4.06	1.22	0.21	0.57	0.58
- Mobile phone	2.86	10.41	2.31	2.38	0.82	0.52
- Packlink	0.28	1.15	0.45	0.05	0.02	-
- Installation fee and others	1.15	0.80	2.00	0.96	0.90	1.21

Expenditure Group	1994					
	Region					
	Whole Kingdom.	Bangkok	Central	North	Northeast	South
Percent of Households	100.00	14.80	19.40	20.80	31.80	13.20
All goods and Services	4803.74	9164.26	4874.98	3781.84	3442.56	4704.38
<u>Communications services</u>	70.89	215.90	61.03	42.09	31.58	63.01
- Telephone	59.70	166.19	55.14	38.27	27.07	59.48
- Packlink	9.17	48.30	3.71	2.45	1.81	1.69
- Membership and Internet Services	-	-	-	-	-	-
- Postage and telegraph	1.09	0.85	0.81	0.72	1.74	0.79
- Other communication: mobile phone	0.93	0.56	1.37	0.65	0.96	1.05
<u>Communication equipment</u>	5.80	13.08	3.82	5.54	1.50	11.36
- Telephone handset	1.08	1.71	1.11	0.95	0.43	2.09
- Mobile phone	2.60	4.61	1.39	2.52	0.34	7.71
- Packlink	0.99	4.82	-	0.80	0.30	0.16
- Installation fee and others	1.13	1.94	1.32	1.27	0.43	1.40

TEIB takes into consideration the goods and services expenditure's significant level at 0.03%* of overall expenditure as a criteria for selecting to be in "the market basket". Currently, the item structure in the Transportation and Communication is shown as follows:

Major Group:	1997	1994
Transportation and Communication	Percentage of Total Expenditure Weight	Percentage of Total Expenditure Weight
Communication and Equipment	1.67	1.40
Telephone	1.46	1.19
Postage	0.02	0.01
Mobile service charge	0.09	0.01
Pager service charge	0.01	0.12
Telephone set	0.02	0.01
Mobile handset	0.01	0.01
Pager	0.06	0.05

Identification of specification

In Thailand, the determination of the item specifications reflects the consumption pattern, taste and preference. The specification is defined centrally so that the price collector can identify the items. The current specification of mobile phone is shown as follows:

Item	Specification
Mobile phone handset	Motorolla 1800 # 3310, Nokia 900 # 232 N GSM 2 Watt # 3210
Mobile phone service charge	Actual monthly fee + Actual airtime in same registered area

Because of fierce competition in developing new models, which results in short life cycle of the products, it is the difficult to specify the commodities. The new models are quickly developed to replace the old ones. The specification, therefore, has to be changed quite often.

Compilation practice

- Methods used to combine basic price observation: Modified Laspeyres methodology is used to compute the basic indexes. To update the item's weight, the price relative (which is the comparison of the current price to its previous price) is multiplied by its previous weight. The index is computed from the current group weights compared to previous group weights and multiplied by its previous period's index.
- Formula for aggregation: Modified Laspeyres methodology in which weighted average of regional weights (Bangkok and 4 regions) are combined.
- Method used to update weights for price change: The original expenditure weights were updated by price change in the old index series to estimate expenditure in linking month.
- Linking method: Old weights are used to compare link month with the month before. New weights are used between link month and the subsequent month. The old and new series are chained together.

The problem of mobile phone price and existing methodology

Nowadays, the complex ways of charging services in cellular telephone communication, such as package price and pre-paid card, become the main issue in price measurement. We can say that the competition now is the service charge competition by reducing airtime and monthly fee on promotion package price. The package price, which has various types in terms of price and time period (Annex 1), includes mobile handset and service charge together. In the package price, one of the major problems is its frequently changed price. Quality assessment of these changes is hardly be done.

In Thailand, the current price collection in mobile phone is divided into two item strata : mobile handset and mobile phone service charge. Instead of the package price or prepaid card, the actual service charge is quoted to calculate the index. However, this has become a critical issue whether the actual price is still an appropriate price for current situation and the accurate price measurement.

The other problem of package price is the quality change of mobile phone. The cellular, as another technological goods & services, has improved frequently. That means the quality has increased overtime. The calculation of the price index, which is used to measure the pure price change, by using the price, should pay attention to quality adjust as well. In Thailand, the cellular telephone manufactures have launched the new models within six or twelve months every year. In case of the old models disappear permanently from the market, the price statistician will replace with the new specification. For example, in Nov.,2000 Motorola 1800 # 3110 is replaced with Motorola 1800 # 3310.

At present, the special adjustment for quality change has not yet been employed. In practice the direct substitution of comparable item is therefore used when item changes permanently. The observed difference in price is counted as the price change. The problem here is that some unnoticed quality change is sometime inadvertently treated as a price change and therefore resulting in an upward bias to the CPI.

Conclusion

Due to the rapid technology development causing the short life cycle of product and the frequently change in service package price such as mobile phone package price, the statisticians attempt to cope with these challenges. Moreover, Thailand is also affected from the globalization influence which bring to the frequently changes in the Thai consumption pattern. The traditional methods of price index calculation hardly reflect these enormous changes. Being the price change measurement, the consumer price index is necessary developed the methods to accurate the index. In case of Thailand, the rapid change in package price become the critical issue needed the research the method to deal with these issues.

Annex 1

Example of promotion package (swap promotion and new promotion) is shown below:

New promotion (now until 31 January, 2001)

Promotion	Detail
Promotion 1	Monthly fee: 300 baht. Only half of Air time will be charged.
Promotion 2	Monthly fee: 500 baht. For nationwide calls 1,600 baht, only 500 baht will be charged.
Promotion 3	Monthly fee: 500 baht. For nationwide calls 3,000 baht, only 800 baht will be charged.

Terms

1. 24-month promotion for numbers registered in Bangkok and perimeter, central and eastern area.
2. 36-month promotion for numbers registered in other areas.
3. The registration fee is exempt.

Promotion SWAP (now – 31 January,2001)

Promotion period for SWAP WP 1800

- Calling from WP1800 - WP1800	18 months
- Calling from WP1800 – WP 1800 or from WP 1800 – WP 800	18 months
- Calling from Single Number – Single Number or Single Number – World Phone System	18 months

Promotion

Details

Package 1	Monthly fee: 365 1 baht/minute for call made in same registered area to World Phone numbers and during off peak period and Sunday
Package 2	Monthly fee:500 baht

A Pay 400 baht for 400 minutes of calls made in the same registered area

B Pay 700 baht for 700 minutes of calls made in the same registered area

Package 3 Monthly fee:500 baht

A Pay 400 baht for 200 minutes of nationwide calls

B Pay 700 baht for 350 minutes of nationwide calls