

CityU-Hong Kong Consumer Satisfaction Index (CityU-HKCSI): 2007 Results

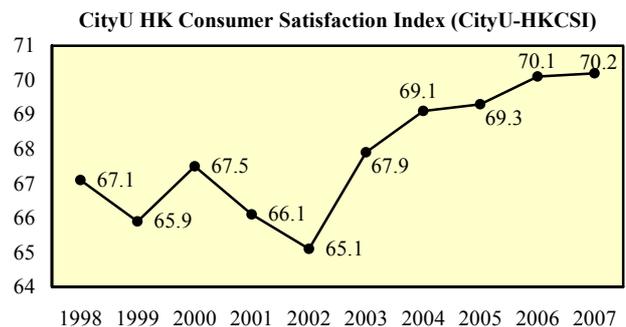
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1. What Is CityU-HKCSI?

- Established by City University of Hong Kong's Department of Management Sciences since **1997**, based on more than **140,000** successful computer-assisted telephone interviews;
- A performance indicator for Hong Kong businesses, measuring the satisfaction levels of Hong Kong consumers towards the quality of locally-sold products (including goods and services);
- Covering **68** goods and services which, grouped into **six** "daily life" categories for easy analysis, make up more than **75%** of the weighting in the Hong Kong composite Consumer Price Index (CPI);
- Allowing for direct comparisons of satisfaction levels of different consumers with different products through an advanced statistical modeling methodology.

2. CityU-HKCSI Trend

CityU-HKCSI has a scale of 0~100 to represent ascending levels of consumer satisfaction. Readings of CityU-HKCSI from 2004 to 2007 were **69.1**, **69.3** and **70.1** and **70.2** respectively. The year-to-year HKCSI changes were **+0.6%** from 2004 to 2005, **+1.2%** from 2005 to 2006, and **+0.1%** from 2006 to 2007.



3. Analysis of CityU-HKCSI 2007 Results

CityU-HKCSI remained at a high level of **70.2** in 2007, slightly up 0.1% from the previous record high of 70.1 in 2006, which was due to the balancing effects of:

- Bigger improvement of 3.8% in consumer satisfaction with the highly-weighted *Housing & Related Items* (which in turn was due to the bigger CSI increases of 4.9% and 3.3% of the highly-weighted *renting private houses* and *renting public houses*);
- Bigger decrease of -3.6% in consumer satisfaction with *Food & Drink* (which in turn was largely due to the bigger CSI declines of -5.0% and -3.1% of the highly-weighted *fast food shops & cafes* and *Chinese & Western restaurants*);
- Considerable drop of -2.0% in consumer satisfaction with *Clothing & Personal Care* (which in turn was largely due to the considerable CSI decline of -3.4% of the highly-weighted *everyday clothes*); and
- Very small changes in consumer satisfaction with the other three product categories.

Product Category (Sub-HKCSI)	Scores				Change Rates		
	2004	2005*	2006	2007	2004~05	2005~06	2006~07
Clothing & Personal Care	73.8	72.2 (73.1)	73.8	72.3	-0.9%	2.2%	-2.0%
Food & Drink	71.2	70.0 (70.0)	72.5	69.9	-1.7%	3.6%	-3.6%
Housing & Related Items	64.7	66.7 (66.7)	66.0	68.5	3.1%	-1.0%	3.8%
Transport	72.3	72.5 (72.4)	73.5	73.4	0.1%	1.4%	-0.1%
Information & Entertainment	72.1	71.8 (72.1)	72.6	72.3	0.0%	1.1%	-0.4%
Non-CPI Items	69.3	69.6 (69.6)	70.5	70.6	0.4%	1.3%	0.1%
All Products (CityU-HKCSI)	69.1	69.3 (69.5)	70.1	70.2	0.6%	1.2%	0.1%

*: CSIs in brackets were based on the 1999/2000 CPI weights in order to be comparable with those in previous years.

4. Product Category Results

In terms of the relative Sub-HKCSIs concerning the six product categories in 2007, Hong Kong consumers were most satisfied with *Transport* that achieved the highest Sub-HKCSI of 73.4, followed by *Clothing & Personal Care* (72.3), *Information & Entertainment* (72.3), and then by *Non-CPI Items* (70.6) and *Food & Drink* (69.9). They were still least satisfied with *Housing & Related Items* which received the lowest Sub-HKCSI of 68.5. The relative Sub-HKCSIs of the six product categories in previous years demonstrated similar patterns, but the gaps between the bottom *Housing & Related Items* and other product categories had significantly narrowed.

5. CityU-HKCSI 2007 Results Explained for the Six Product Categories

Product Category	CityU-HKCSI Modeling Variables: 2007 Scores and Change Rates Over 2006			
	Expected Quality	Actual Quality	Quality/Price Ratio	Satisfaction (CSI)
Clothing & Personal Care	72.7 (-2.2%)	72.2 (-1.8%)	71.7 (-1.9%)	72.3 (-2.0%)
Food & Drink	71.6 (-1.2%)	70.8 (-2.6%)	68.7 (-4.2%)	69.9 (-3.6%)
Housing & Related Items	69.4 (-0.9%)	68.5 (-1.0%)	69.1 (4.5%)	68.5 (3.8%)
Transport	74.5 (0.5%)	74.2 (-0.1%)	71.8 (1.1%)	73.4 (-0.1%)
Information & Entertainment	74.7 (0.3%)	73.0 (0.3%)	71.8 (0.0%)	72.3 (-0.4%)
Non-CPI Items	69.9 (-0.1%)	69.3 (-0.4%)	69.1 (-0.1%)	70.6 (0.1%)
Overall	71.6 (-0.7%)	70.6 (-1.4%)	69.8 (0.4%)	70.2 (0.1%)

- Overall consumer satisfaction improvement of 0.1% in 2007 was due to an improvement of 0.4% in the products' *quality/price ratios*, although their *expected quality* and especially *actual quality* decreased 0.7% and 1.4% respectively. On the other hand, since *actual quality* (70.6) was below consumers' rational *expectations* (71.6), and quality performance in relation to price (i.e., *quality/price ratios*) was even lower (69.8), overall consumer satisfaction level (70.2) was still not-too-high.
- *Transport* had the highest actual quality performance (74.2) which, although slightly below consumer expectations (74.5), was most competitive relative to price (with the highest quality/price ratio of 71.8), hence achieved the highest Sub-HKCSI (73.4).
- Similarly, *Information & Entertainment* and *Clothing & Personal Care* had the 2nd and 3rd highest actual quality performances (73.0 and 72.2) which, although below consumer expectations (74.7 and 72.7), were very competitive relative to price (with the highest quality/price ratios of 71.8 and 71.7), hence both achieved the 2nd highest Sub-HKCSI (72.3).
- *Non-CPI Items* had low actual quality performance (69.3) which was below consumer expectations (69.9) and less competitive relative to prices (with low quality/price ratio of 69.1), hence reported low Sub-HKCSI (70.6).
- *Food & Drink* had middle-to-low actual quality performance (70.8) which was below consumer expectations (71.6) and least competitive relative to price (with the lowest quality/price ratios of 68.7), hence reported the 2nd lowest Sub-HKCSI (69.9). This result was also attributable to the fact that, with considerable decline in actual quality (-2.6%) and especially significant decline in quality/price ratio (-4.2%), *Food & Drink* reported the biggest deterioration in consumer satisfaction (-3.6%).
- *Housing & Related Items* had the lowest actual quality performance (68.5) which was below consumer expectations (69.4) and less competitive relative to price (with the 2nd lowest quality/price ratio of 69.1), hence achieved the lowest Sub-HKCSI (68.5). On the other hand, although experiencing certain declines in expected and actual quality (-0.9% and -1.0%), *Housing & Related Items* witnessed the greatest improvement in quality/price ratio (4.5%), hence reported the biggest improvement in consumer satisfaction (3.8%) and considerably narrowed the gap to other product categories in terms of Sub-HKCSIs.

6. Best Performers (Highest CSI Products) in 2007

- In 2007, *music CDs* ranked No.1 with the highest CSI of 80.3, followed by *postal services* of 79.4, *refrigerators* of 78.2, *dairy products & non-alcoholic drinks* of 77.4, and *camera & related products* of 77.1. The good performances of these products were mainly due to their high expected and actual quality and especially due to their high quality/price ratios.

The 10 Highest CSIs (2007)		Expected Quality		Actual Quality		Quality/Price Ratio	
Product	CSI	Score	Rank	Score	Rank	Score	Rank
music CDs	80.3	81.0	No. 1	82.3	No. 1	80.4	No. 2
postal services	79.4			78.4	No. 5	80.5	No. 1
refrigerators	78.2	77.2	No. 10	77.3	No. 7	78.3	No. 4
dairy products & non-alcoholic drinks	77.4	78.8	No. 3	78.7	No. 4	76.3	No. 9
camera & related products	77.1	79.1	No. 2	78.7	No. 3	78.1	No. 5
broadcasting/radio stations	76.6	73.0	No. 39	74.8	No. 22	76.4	No. 8
jewelries	76.2	77.1	No. 11	77.4	No. 6	74.4	No. 12
motor vehicles	76.1	77.8	No. 6	77.0	No. 8	77.3	No. 6
small/medium electrical appliances	75.9	77.6	No. 8	75.8	No. 18	75.9	No. 10
public hospitals: inpatient departments	75.7	75.3	No. 19	78.7	No. 2	80.0	No. 3

- It was noticed that in the past *rice* had been in the top 10s of CSIs for many years, but in 2007 witnessed the 2nd biggest decline of -4.9% in CSI (due to big declines of -3.5% and -4.4% in actual quality and quality/price ratio) and hence was dropped from the best performers' list.

7. Best Performers (Highest CSI Products) since 2004

CityU-HKCSI results from the past *four* years identified the following four *consistent best performers*:

- *music CDs* had showed up in the top 2 of CSIs each year since 2004;
- *dairy products & non-alcoholic drinks* had ranked Nos. 3 and 4 each year since 2004;
- *postal services* ranked Nos. 6 and 9 in 2004 and 2005, and Nos. 1 and 2 in 2006 and 2007; and
- *jewellery* ranked No. 3 from 2004 to 2005, and Nos. 10 and 7 in 2006 and 2007.

8. Worst Performers (Lowest CSI Products) in 2007

- At the other extreme, *shopping in Shenzhen* and *job-seeking magazines* received the lowest CSIs of 60.2 and 61.8 in 2007, preceded by *entertainment in Shenzhen*, *tunnels* and *Internet service providers (ISPs)* of 65.1, 65.9 and 66.0 respectively. The poor performances of these products were mainly due to their low expected and actual quality and especially due to their low quality/price ratios.

The 10 Lowest CSIs (2007)		Expected Quality		Actual Quality		Quality/Price Ratio	
Product	CSI	Score	Rank	Score	Rank	Score	Rank
<i>shopping in Shenzhen</i>	60.2	53.8	Bottom 1	54.8	Bottom 1	60.7	Bottom 2
<i>job-seeking magazines</i>	61.8	63.0	Bottom 3	59.4	Bottom 2	61.2	Bottom 3
<i>entertainment in Shenzhen</i>	65.1	59.2	Bottom 2	61.1	Bottom 3	66.4	Bottom 9
<i>tunnels</i>	65.9			70.4	Bottom 20	66.1	Bottom 7
<i>internet service providers (ISPs)</i>	66.0	73.6	Bottom 29	66.8	Bottom 6	65.0	Bottom 5
<i>housing rent: public house</i>	66.5	67.3	Bottom 4	66.8	Bottom 7	70.3	Bottom 28
<i>real estate agents</i>	66.7	68.0	Bottom 5	67.6	Bottom 10	63.6	Bottom 4
<i>gym & slimming centres</i>	67.1	68.8	Bottom 7	65.4	Bottom 4	65.2	Bottom 6
<i>television stations: paid</i>	67.3	70.8	Bottom 16	69.1	Bottom 14	60.2	Bottom 1
<i>fast food shops & cafes</i>	67.9	71.0	Bottom 17	70.0	Bottom 18	66.3	Bottom 8

- It was noticed that in the past *renting private houses* had been in the bottom 10s of CSIs for many years, but in 2007 reported the biggest increase of 4.9% in CSI (due to a significant improvement of 5.5% in quality/price ratio) and hence left the worst performers' list.

9. Worst Performers (Lowest CSI Products) since 2004

CityU-HKCSI results from the past *four* years identified the following five *consistent worst performers*:

- *shopping in Shenzhen* had been in the bottom 2 of CSIs each year since 2004;
- *job-seeking magazines* had been in the bottom 3 each year since 2004;
- *renting public houses* had been in the bottom 3 to 6 each year since 2004;
- *real estate agents* had been in the bottom 6 and 7 each year since 2004; and
- *entertainment in Shenzhen* had showed up in the bottom 3 to 9 each year since 2004.

10. Highest CSI Rises and Drops

In 2007, *renting private houses* reported the greatest improvement in consumer satisfaction over 2006 with the highest CSI increase rate of 4.9%, followed by *weekly magazines*, *renting public houses*, *insurance services* and *movies* with considerable CSI rises between 2.9% and 3.9%. At the other extreme, *fast food shops & cafes* witnessed the biggest drop in consumer satisfaction from 2006 to 2007 with the highest CSI decrease rate of -5.0%, preceded by *rice*, *international telephone services*, *fish & fresh sea products*, *edible oil* and *local telephone services* with big CSI declines between -4.9% and -4.4%.

The 10 Highest CSI Rise Rates (2006~07)		The 10 Highest CSI Drop Rates (2006~07)	
<i>housing rent: private house</i>	4.9%	<i>fast food shops & cafes</i>	-5.0%
<i>weekly magazines</i>	3.9%	<i>rice</i>	-4.9%
<i>housing rent: public house</i>	3.3%	<i>international telephone services</i>	-4.9%
<i>insurance services</i>	3.1%	<i>fish & fresh sea products</i>	-4.6%
<i>movies (by region)</i>	2.9%	<i>edible oil</i>	-4.5%
<i>public transport: buses</i>	2.7%	<i>local telephone services</i>	-4.4%
<i>tunnels</i>	2.6%	<i>furniture</i>	-4.0%
<i>alcoholic drinks</i>	2.3%	<i>entertainment in Shenzhen</i>	-4.0%
<i>camera & related products</i>	2.3%	<i>everyday clothes: chain stores</i>	-3.4%
<i>job-seeking magazines</i>	2.1%	<i>Chinese & Western restaurants</i>	-3.1%

Appendix 1. CityU-HKCSI Results (2004~2007)

Category	Product	CSI Scores				Change Rates		
		2004	2005*	2006	2007	2004-05	2005-06	2006-07
Clothing & Personal Care	everyday clothes: chain stores	72.4	71.2	73.6	71.1	-1.7%	3.4%	-3.4%
	leather shoes	71.6	73.7	75.0	73.4	2.9%	1.8%	-2.1%
	sports shoes	74.9	74.6	74.9	74.6	-0.4%	0.4%	-0.4%
	make-up & skin-care products	73.7	73.7	73.9	73.6	0.0%	0.3%	-0.4%
	jewellery	78.3	77.2	76.7	76.2	-1.4%	-0.6%	-0.7%
	public hospitals: inpatient departments	76.2	73.2	77.2	75.7	-3.9%	5.5%	-1.9%
	proprietary medicines & supplies	76.1	74.3	76.3	74.9	-2.4%	2.7%	-1.8%
	health food	70.6	66.7	69.7	69.5	-5.5%	4.5%	-0.3%
	gym & slimming centres	67.1	66.8	68.0	67.1	-0.4%	1.8%	-1.3%
	municipal sports centres	68.3	70.0	71.8	73.1	2.5%	2.6%	1.8%
	Sub-HKCSI	73.8	72.2 (73.1)	73.8	72.3	-0.9%	2.2%	-2.0%
Food & Drink	fast food shops & cafes	69.8	68.0	71.5	67.9	-2.6%	5.1%	-5.0%
	Chinese & Western restaurants	70.2	68.3	71.3	69.1	-2.7%	4.4%	-3.1%
	rice	78.1	77.9	78.8	74.9	-0.3%	1.2%	-4.9%
	bread, cakes & puddings	72.7	73.2	74.1	72.5	0.7%	1.2%	-2.2%
	fish and fresh sea products	72.0	73.6	74.0	70.6	2.2%	0.5%	-4.6%
	fresh meat	74.9	75.9	75.9	74.8	1.3%	0.0%	-1.4%
	fresh fruits	71.3	70.1	71.1	70.4	-1.7%	1.4%	-1.0%
	edible oil	76.4	76.2	75.8	72.4	-0.3%	-0.5%	-4.5%
	dairy products & non-alcoholic drinks	78.2	77.2	79.2	77.4	-1.3%	2.6%	-2.3%
	alcoholic drinks	74.2	72.7	73.7	75.4	-2.0%	1.4%	2.3%
	Sub-HKCSI	71.2	70.0 (70.0)	72.5	69.9	-1.7%	3.6%	-3.6%
Housing & Related Items	housing rent: private house	63.6	65.9	64.8	68.0	3.6%	-1.7%	4.9%
	housing rent: public house	62.5	64.2	64.4	66.5	2.7%	0.3%	3.3%
	water supply	69.7	67.6	71.4	70.1	-3.0%	5.6%	-1.8%
	electricity supply	71.7	72.8	72.6	71.1	1.5%	-0.3%	-2.1%
	Towngas	71.6	72.9	74.3	74.5	1.8%	1.9%	0.3%
	furniture	70.7	68.7	72.0	69.1	-2.8%	4.8%	-4.0%
	refrigerators	75.2	75.9	77.9	78.2	0.9%	2.6%	0.4%
	washing machines	75.1	74.3	75.1	73.4	-1.1%	1.1%	-2.3%
	air conditioners	72.6	71.3	72.7	72.0	-1.8%	2.0%	-1.0%
	small/medium electrical appliances	75.1	74.6	74.9	75.9	-0.7%	0.4%	1.3%
	Sub-HKCSI	64.7	66.7 (66.7)	66.0	68.5	3.1%	-1.0%	3.8%
Transport	motor vehicles	74.5	75.4	77.2	76.1	1.2%	2.4%	-1.4%
	tunnels	68.1	60.8	64.2	65.9	-10.7%	5.6%	2.6%
	motor fuel	74.1	71.9	74.0	73.5	-3.0%	2.9%	-0.7%
	airlines	75.4	74.9	75.1	74.2	-0.7%	0.3%	-1.2%
	public transport: buses	70.6	73.6	71.4	73.3	4.2%	-3.0%	2.7%
	public transport: railways	73.0	72.6	76.0	75.1	-0.5%	4.7%	-1.2%
	public transport: other modes	68.8	67.1	68.9	68.6	-2.5%	2.7%	-0.4%
	Sub-HKCSI	72.3	72.5 (72.4)	73.5	73.4	0.1%	1.4%	-0.1%
Information & Entertainment	postal services	77.7	75.6	79.9	79.4	-2.7%	5.7%	-0.6%
	newspapers	71.5	72.3	70.1	70.1	1.1%	-3.0%	0.0%
	weekly magazines	66.4	64.4	66.2	68.8	-3.0%	2.8%	3.9%
	international telephone services	73.7	73.2	77.7	73.9	-0.7%	6.1%	-4.9%
	mobile phone services	69.4	70.4	69.5	70.8	1.4%	-1.3%	1.9%
	mobile phones	73.1	74.5	75.2	75.7	1.9%	0.9%	0.7%
	local telephone services	72.5	72.3	74.6	71.3	-0.3%	3.2%	-4.4%
	television stations: paid	67.0	61.6	68.2	67.3	-8.1%	10.7%	-1.3%
	video & sound equipment	73.7	72.8	74.1	74.5	-1.2%	1.8%	0.5%
	package tours: travel agents	73.9	72.8	73.9	72.8	-1.5%	1.5%	-1.5%
	film	80.0						
	camera & related products	73.0	75.7	75.4	77.1	3.7%	-0.4%	2.3%
	movies	74.2	73.1	71.5	73.6	-1.5%	-2.2%	2.9%
personal computers	72.2	74.9	76.0	75.2	3.7%	1.5%	-1.1%	
Internet service providers (ISPs)	67.3	67.3	67.8	66.0	0.0%	0.7%	-2.7%	
music CDs	79.7	81.1	79.8	80.3	1.8%	-1.6%	0.6%	
movie CDs	71.9	74.4	73.0	72.9	3.5%	-1.9%	-0.1%	
	Sub-HKCSI	72.1	71.8 (72.1)	72.6	72.3	0.0%	1.1%	-0.4%
Non-CPI Items	housing purchase: private house	72.3	71.6	72.5	71.6	-1.0%	1.3%	-1.2%
	insurance services	71.6	70.8	71.2	73.4	-1.1%	0.6%	3.1%
	television stations: free	73.6	73.8	73.0	74.3	0.3%	-1.1%	1.8%
	broadcasting/radio stations	77.4	74.0	77.8	76.6	-4.4%	5.1%	-1.5%
	banks: general services	71.5	73.3	73.3	73.4	2.5%	0.0%	0.1%
	banks: loan	71.7	69.7	72.6	72.8	-2.8%	4.2%	0.3%
	investment services	72.4	73.5	75.6	75.7	1.5%	2.9%	0.1%
	supermarkets	71.3	71.4	72.6	71.0	0.1%	1.7%	-2.2%
	department stores	72.8	70.8	72.5	72.4	-2.7%	2.4%	-0.1%
	real estate agents	65.3	65.3	65.3	66.7	0.0%	0.0%	2.1%
	shopping in Shenzhen	57.1	59.6	61.7	60.2	4.4%	3.5%	-2.4%
	entertainment in Shenzhen	63.8	66.1	67.8	65.1	3.6%	2.6%	-4.0%
	job-seeking magazines	59.0	61.3	60.5	61.8	3.9%	-1.3%	2.1%
	comprehensive websites	72.5	74.4	73.5	74.8	2.6%	-1.2%	1.8%
	job-seeking websites	67.2	68.5	68.3	69.0	1.9%	-0.3%	1.0%
		Sub-HKCSI	69.3	69.6 (69.6)	70.5	70.6	0.4%	1.3%
CityU-HKCSI (Overall)		69.1	69.3 (69.5)	70.1	70.2	0.6%	1.2%	0.1%

*: CSIs in brackets were based on the 1999/2000 CPI weights in order to be comparable with those in previous years.

Appendix 2. CityU-HKCSI Methodology

A. What Is Consumer Satisfaction?

- A key marketing concept, representing consumer's evaluation of the *discrepancy* between consumer's pre-purchase expectations and post-consumption assessments of the product's performance;
- An important business goal — a company's long-term profitability depends on consumers' repeated purchases which greatly depend on consumer satisfaction with the company's products.

B. Why to Develop a Unified CityU-HKCSI?

- ◇ Satisfaction, like attitude and emotion, is a latent variable that is not directly measurable. Traditional approaches to measuring consumer satisfaction through simple tabulations of consumers' "very satisfied" to "very dissatisfied" responses to a single question may not be appropriate since:
 - Using single-item scales to gauge consumers' level of satisfaction usually has low reliability (high variance) and cannot capture the complexity of consumer satisfaction.
 - Levels of satisfaction measured in this way cannot be directly compared across different products and consumer sectors due to different comparison baselines.
 - Conventional measurement of satisfaction is isolated from its context and thus cannot establish relationships between consumer satisfaction and its causes and consequences.
- ◇ Using advanced statistical and marketing research methods, the project team has developed models which relate consumer satisfaction to its causes and consequences, and employed multi-item scales to measure consumer satisfaction. Under this approach, ***satisfaction levels of different consumers towards different products become directly comparable and can be combined*** to form a unified CityU Hong Kong Consumer Satisfaction Index (CityU-HKCSI) that is able to reflect the overall satisfaction level of Hong Kong consumers.

C. How to Construct CityU-HKCSI?

- ◇ In the model, consumer satisfaction with a product is based on the difference between *consumer expectations* for the product's quality (performance) and the product's *actual quality (performance)* as assessed by consumers. Also reflected in the model are *consumer characteristics*, *price factors* and satisfaction's main consequences: *consumer voice* and *consumer loyalty*. The structural relationships between these latent variables are modelled in an econometric form, while these latent variables are measured by their survey indicators such as fitness-for-use, product reliability, quality/price ratio, number of complaints, repurchase possibility, price tolerance, personal education and income levels, etc. The whole model is estimated by a variance-based *structural equation modelling* technique, with data coming from the more than 10,000 successful computer-assisted telephone interviews conducted in Hong Kong between July and September every year by the project team.
- ◇ Compatible Consumer Satisfaction Index (CSI) is ***first*** compiled for ***each*** of the selected products based on its modelling estimates. Currently the CityU-HKCSI study covers **68** goods and services which make up more than **75%** of the weighting in the Hong Kong composite Consumer Price Index (CPI), including:
 - Durable items such as *motor vehicles, electrical appliances, private housing*, etc.;
 - Medium-term items such as *apparel, footwear, insurance services*, etc.;
 - Utilities such as *electricity supply, Towngas*, etc.;
 - Consumable items such as *newspapers, fresh meat, alcoholic beverages*, etc.;
 - Government services such as *public housing, postal services, water supply*, etc.
- ◇ To facilitate analysis, all the selected products are grouped into **six** "daily life" categories:
 - Clothing and Personal Care;
 - Food and Drink;
 - Housing and Related Items;
 - Transport;
 - Information and Entertainment;
 - Non-CPI Items.

Then six Sub-HKCSIs at product category levels and an overall CityU-HKCSI are produced by aggregating the CSIs of the relevant products using their weights in the composite CPI as follows:

$$\text{CityU-HKCSI (or Sub-HKCSI)} = \sum_{j=1}^n \text{CSI}_j \times \text{Weight}_j$$

where CSI_j is the consumer satisfaction index for product j , Weight_j is derived from the composite CPI weight for product j , and n is the number of products involved.

D. Properties of CityU-HKCSI

- ◇ Product level CSIs reflect the performance of relevant companies in terms of consumer satisfaction with their products, and the CityU-HKCSI results can provide explanations about why the levels of consumer satisfaction with some products increase while the levels of consumer satisfaction with others decrease. Generally, changes in consumer satisfaction with a product are strongly linked to changes in the product's quality and price as assessed by the consumers. Such information for all products in CityU-HKCSI is available and can be used to examine the changes in their CSIs and the associated causes.
- ◇ As the CSI scores have been properly standardized, scores of different products are directly comparable and a Hong Kong-wide standard of consumer satisfaction can be established. For example, in 2007 Hong Kong consumers were much more satisfied with *public hospitals' inpatient departments* (75.7) than with *paid TV channels* (67.3) and *tunnels* (65.9) but they were even more satisfied with *postal services* (79.4) as indicated by the respective CSIs (see Table 1). Different companies and organizations can use these CityU-HKCSI results as a yardstick for measuring and then improving consumer satisfaction.
- ◇ Since many products such as *Chinese & Western restaurants, travel agents, banks, and public transport* included in the CityU-HKCSI are quite broad in scope, they can indeed be viewed as the representative of the underlying industries. As such, CityU-HKCSI provides a baseline to directly compare the levels of consumer satisfaction with the performance of different industries in Hong Kong.
- ◇ Countries such as China, Germany, Sweden and the U.S. have developed similar CSIs. Although indices from different countries may not be directly comparable, we can at least compare the trends and relative scores of these indices with CityU-HKCSIs to draw general pictures about improvement rates and distributions of consumer satisfaction with similar products in Hong Kong and other countries.

E. CityU-HKCSI for Companies

- ◇ Although CityU-HKCSI is currently product-based, CSIs at company level are also constructible and, in fact, every year we do compile CSIs for certain local companies. According to internal resources and external requirements, we hope to produce separate CSI scores for more companies and organizations in the future. It is therefore possible to regularly track changes in the relationships between the companies and their consumers and to establish connections between companies' CSIs and their business performance (e.g., profits and stock prices), thus providing valuable information on how the companies stand with their consumers and competitors.
- ◇ To do so, we need to select some companies with high qualities or potentials for in-depth analysis by (1) modifying the questionnaire to include some specific items for performance diagnostics purposes, and (2) interviewing more consumers to increase the modelling reliability. Since satisfied consumers represent a real economic asset to companies, companies should invest in continuously improving consumer satisfaction. However, before consumer satisfaction can be improved, it must be appropriately measured. The CityU-HKCSI model can provide companies with a reliable way to measure and manage consumer satisfaction.

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